books

The Future of Large Dams

Thayer Scudder
2005, Earthscan, London, £40.50,
ISBN: 1 84407 155 3 hardback,
389pp

Thayer Scudder, Professor Emeritus at the California Institute of Technology, has been involved in research and studies on the socio-economic effects of large dams for nearly 50 years since 1956 when he was called upon to investigate 'dam-induced resettlement' resulting from the construction of the Kariba Dam on the Zambezi River on the boundary of Zambia and Zimbabwe. He has undertaken similar studies on large dams in many other African countries, in Asia and China, and from 1998 to 2000 he was a Commissioner on the World Commission on Dams (WCD).

This book is a very timely follow-up to the WCD's Final Report, issued in November 2000. The Commission had been set up on the recommendations of a workshop at Gland, Switzerland, hosted jointly by the International Union for the Conservation of Nature and Natural Resources (IUCN) and the World Bank in 1997. The WCD's Final Report met with criticism from several major dam-building countries, from the World Water Council, ICOLD and ICID, and the World Bank appeared to be unwilling to play a lead role in pushing forward the new decision-making framework for water resources development advocated by the World Commission. In recent years the World Commission's report and recommendations have been in danger of being forgotten.

The first two chapters introduce the debate on the future of large dams. Scudder has adopted the ICOLD definition of a large dam as being 15 m or more in height, or if between 5 and 15 m having a storage capacity of 3 million cubic metres or more, and his studies have concentrated on investigating dams over 60 m high. Whilst fully accepting the benefits of large dams and therefore the need for their construction in future, he is deeply concerned about the human, sociological and economic effects of many large dams already constructed or under construction.

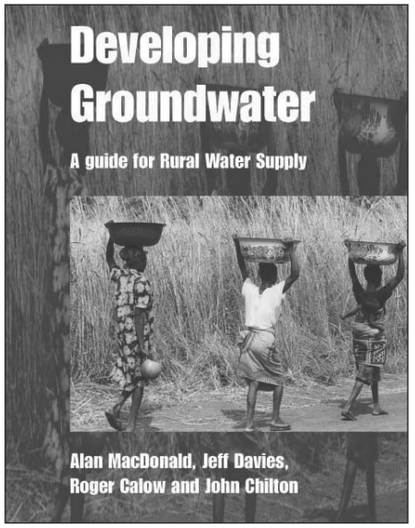
Chapter 3 is devoted to a comparative study of 'dam-induced resettlement' in 50 dam projects from 1952 to 2002, concluding that his survey confirms 'the unsatisfactory and unacceptable impact of large dams on those who must involuntarily resettle from future reservoir basins'. Scudder does not oppose the construction of large dams, which he recognizes as essential to development. He does, however, strongly criticize the absence of attention to the social and economic impact of resettlement, which he records has in the majority of cases worsened the living standards of many thousands of people resettled. Chapter 4 describes how some river basin communities do benefit from resettlement, but this applies particularly to projects involving irrigated agriculture.

Chapters 5 and 6 cover a number of case studies, Chapter 7 discusses the social and environmental impacts both downstream and in the upper catchments of dam projects, and Chapter 8 deals with institutional arrangements and the much neglected need to involve all concerned in a dam project – not only governments, local authorities, funding agencies, consultants and contractors, but also the local institutions and people.

Chapter 9 ends the book on an encouraging note about the way forward for large dams. Scudder accepts that there is still a need for large dams in future development, but stresses that 'a decision to build a large dam should only be based on an open and transparent options assessment process in which relevant stakeholders are fully informed of the risks involved'. This book contains an enormous amount of valuable data derived from the many years of the author's work. On the back cover Robert Goodland, former Chief Environmental Adviser of the World Bank Group, is quoted: 'This is a handbook for all of those involved in the complex task of planning and managing the most precious of all natural resources, and maximizing the benefits for all.'
Peter Stern, Christian Engineers in Development, UK

Developing Groundwater: a guide for rural water supply

Alan MacDonald, Jeff Davies, Roger Calow and John Chilton
2005, ITDG, ISBN: 185339596X,
384pp, £19.95



This guide goes a long way to de-mystifying the subject of groundwater, and creating a sound practical understanding of a subject that is often misunderstood. The subject matter is the assessment and development of groundwater in situations where small water supplies are needed by rural communities, and often only small amounts are available. The geographical emphasis of the book is sub-Saharan Africa, although many of the principles apply in other places too.

The assessment and development of groundwater is set firmly in the context of projects and programmes that attempt to facilitate community management of water points. The third chapter is consequently devoted entirely to the topic of 'projects and communities', while Chapters 1–2 and 4–9 together cover the science and engineering of groundwater occurrence, groundwater exploration, source construction, yield testing and aspects of water quality. Six appendices provide useful supporting information – Appendix 1 in particular having some good colour photographs of rocks and rock outcrops.

The strengths of this ambitious book are its clarity of explanation (with limited use of jargon, and good descriptions and glossaries); the broad scope, which provides a solid base of knowledge for those working with groundwater; and the significant level of detail on certain topics. The level of detail is variable, however, with more depth for instance on the fairly narrow topic of test pumping (Chapter 7) than on the much wider subject of water source design and construction (Chapter 6), and very little on the key practical issues of tendering, contracts and contract supervision.

As explained in the opening chapter, the content of the book was determined by 'a group of about 80 people from 29 countries'. This may account for a certain

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lack of balance, and the almost complete omission of four subjects: groundwater resource evaluation, the relationship of groundwater to surface water and rainwater, water lifting, and groundwater economics. Each of these is mentioned in passing, but their importance in the context of rural water supply would have justified treatment in some detail. Each of these subjects determines, in different ways, whether the groundwater option is the best for a particular rural community, and what the community management implications will be.

This said, however, I would have no hesitation in recommending this up-to-date guide to anyone looking for a sound understanding of the science of groundwater and a practical background in the scientific and engineering issues surrounding its development for rural water supplies. Chapter 3 is aimed at a rather different readership (the project manager or team leader) than the other chapters (project engineers and hydrogeologists); it alone would make a good introduction to the principles of community-managed rural water supplies.

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Organising Local Documentation Services for the Water and Sanitation Sector: Guidelines

IRC, the Netherlands, 139pp, E12.00 or free download from http://www.irc.nl/page/15708

This book, published by IRC, reflects the now clear understanding of the importance of communicating information within the water and sanitation sector, and the wider conceptual change firmly linking knowledge sharing to achieving the aims of international development and poverty elimination. This timely resource is based on lessons learned from IRC's Resource Centre Development Programme, working with partners in the South with the support of the Netherlands Government to build capacity of water and sanitation resource centres in low-income countries.

Building on a previous 1993 edition, these guidelines acknowledge that there have been major developments in information and communication technologies (ICTs). However, as these advances have yet to reach many people, there remains a strong focus on manual information systems, techniques and processes, at the same time addressing the needs and capacities of those who have access to computerized and online information provision. It takes the reader right back to basics (such as ensuring staff washing facilities), and goes on to more complex managerial and technical issues, presenting theory along with practice, while still retaining a wonderful clarity of style.

Three potential target groups are identified: managers of water and sanitation units wishing to set up or improve a documentation centre, supervisory staff and operational staff working in such centres. Management issues include strategic planning and diagnosis, user needs assessment, policy formulation, staffing, financing and establishing an organizational structure to implement these activities. On a very practical level, detailed advice on space requirements, furniture, storage, computing equipment and software is offered. The latter chapters deal with the more technical aspects of running a documentation service, with guidance on acquisitions, indexing and classification systems.

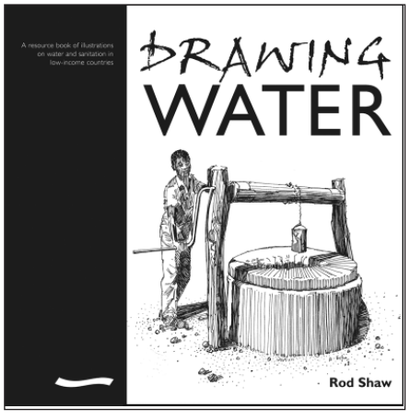
A major strength of these guidelines is that while the main principles of information management covered are generic to all disciplines, the content is subject-specific to water and sanitation, and there are many useful examples with direct application in the sector. Repeated use is made of a small number of key resources, including the Healthlink Worldwide Resource Centre Manual and ItrainOnline, pointing to particular sections within these which offer further detail and explanation of the topic discussed.

Account is taken of the particular difficulties and shortcomings of capacity and resources experienced day to day by those working in low-income countries, such as unreliable mains electricity supply. Even so, there is never a hint of compromising on quality of service and the goal is always the best possible provision of information. As such, it provides huge encouragement and inspiration for those striving to establish documentation services with limited experience, funds and personnel. There is an unspoken expectation that such an enterprise will be given high priority within any organization. The possible lack of institutional buy-in to this, and with it a shortage of dedicated time and resources, may ultimately reduce the achievements of those this book will surely inspire.

Julie Fisher is a Research Associate, Water, Engineering and Development Centre, UK

Drawing Water: a resource book of illustrations on water and sanitation in low-income countries

Rod Shaw
2005, Water, Engineering and Development Centre, UK, 206pp, £24.95, ISBN: 1 84380 085 3



If you are setting up a documentation service of a type described in the previous review, this is certainly a book you would want to include. It is a book with an accompanying CD-rom of illustrations by Rod Shaw of subjects relating to water supply and sanitation. The subjects include handpumps, community wells, pit latrines and solid waste disposal, and it could be an invaluable resource for teachers, fieldworkers and health professionals who can copy or adapt Shaw's illustrations for their communications materials.

Rod Shaw's work will be familiar to *Waterlines* readers from the illustrations for Technical Briefs, WELL fact sheets, and the two books *The Worth of Water* and *Running Water*. These attractive and engaging line drawings lend dignity to some very down-to-earth subjects. This book contains many drawings of latrines, how they are constructed and how they are used by children, adults and disabled people. Part of the enduring problem of getting sanitation onto an equal footing with water is that people are either embarrassed or they laugh about it. These illustrations invite neither response, and Shaw should be thanked for making plain a subject that is too often avoided or skirted around. They are also very clear, bringing out the essentials of the situations and technology that they depict, which might be obscured in a photograph.

In his introduction, Shaw writes about the relative merits of photographs and line drawings. Although digital cameras are making it much easier to drop photos onto the page, they can be country specific, which narrows their applicability, and often they do not photocopy well. Line drawings, by comparison, are often better understood by people who are unfamiliar with illustrations. This book should play an important part in conveying hygiene messages to such people around the world.

Clare Tawney, Editor