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Managing Water Locally: An Essential Dimension of Community Water Development

The Institution of Civil Engineers, Oxfam GB and WaterAid

2011, 96 pages, ISBN 978-1-78077-011-6, available for free download from www.wateraid.org/documents/managing_water_locally.pdf

This book extends the existing literature on the virtues of community-based management beyond wells and pumps, to argue that communities should be more involved in management of water resources overall at catchment, regional, and national levels. The book arose out of a series of presentations jointly organized in 2009–10 by the three ‘author’ organizations: namely, the Institution of Civil Engineers, Oxfam GB, and WaterAid. The core argument is that community-based

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water resource management (CBWRM) – defined as ‘a strategy that enables local water users to be involved in and responsible for the management of their water resources’ – should be more widely applied, both alongside and instead of integrated water resource management (IWRM).

The eight chapters cover options for water resource management (WRM), why WRM is important, examples of WRM in practice in Sierra Leone and Ghana, traditional WRM, examples from Oxfam’s work in Niger and WaterAid’s work in Nepal, and aligning national water policy to field realities. The overall conclusion is that IWRM and CBWRM are compatible and complementary; since IWRM ‘is often over-ambitious and unrealistic’ (p.82), it needs to be coupled with traditional, localized approaches to WRM, for example through dividing river basins into smaller sub-catchments.

The argument put forward in this book touches on some important questions, such as whether greater professionalization or greater voluntarism is required in the water sector; and whether water availability is a significant constraint on access to water, or whether infrastructure management, maintenance, and repair are more important issues. Unfortunately, the book does not really engage with these underlying debates; it reads more like an advocacy report with insufficient evidence to support a predetermined position. For example, claims such as ‘community-based institutions can fulfil an important role in support of weakened government structures’ (p.39) are not supported with examples, and the overall argument seems to rest on an uncritical acceptance of the concept of community and a very rose-tinted view of experience to date with CBM. The case studies are interesting, but not really strong enough to support the claim that they ‘demonstrate the ability of communities to participate in and take ownership of water management’ (p.70) in the long term; especially given existing evidence on the difficulties of achieving this just for management of water infrastructure (e.g. Schouten and Moriarty, 2003).

Overall, the book is nicely presented and an easy read, with examples that help bring the text to life. However, it suffers somewhat from an excess of advocacy over evidence. The book is aimed at water sector practitioners, but I imagine it would be most useful to those just beginning to engage with the sector, seeking an overview of thinking from a couple of leading NGOs. I also have to confess that I personally much prefer books written by named authors rather than a ‘faceless’ collective. The publication can be downloaded free of charge (PDF, 2MB) from the ICE’s website as well as from those of Oxfam and WaterAid.

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Reference

Schouten, T. and Moriarty, P. (2003) *Community Water, Community Management; From System to Service in Rural Areas*, Rugby, UK: Practical Action Publishing; and IRC: The Netherlands.

Encouraging Change: Sustainable Steps in Water Supply, Sanitation and Hygiene, 2nd edition

Sally Sutton and Hope Nkoloma

2011, TALC, 242 pages, ISBN 978-0-9558811-8-3, £10.00

Encouraging Change is an extremely practical and easy-to-use manual on improving water supply, sanitation, and general household hygiene developed for facilitators working in rural Zambia. It draws on participatory methods developed in the 1980s and 1990s for the WASH sector and further environmental health concepts since 2000. It contains a wealth of full-size drawings that can be photocopied and used immediately by facilitators. The manual not only provides a step-by-step guide to helping communities change, but it also empowers facilitators by reinforcing public health concepts. It provides charts and graphs of scientific findings that support the benefits of improved water, sanitation, and hygiene. The text also contains colour photos of water, sanitation, and hygiene options and how they are constructed, giving the facilitator a close-up feel of how things should look.

For me the most striking thing about this manual is that it follows the same line of thinking for WASH improvements at the rural community level that was promoted in the 1980s and 1990s by various organizations in the sector. It follows the same steps of participatory development: identifying the problems, assessing the problems and causes, identifying resources for solutions, selecting options for solutions, planning for change, and then implementing the changes. It describes the same participatory activities promoted for two decades with most of the same drawings developed in that earlier period. For me, this indicates that these methods are tried and true – they still work – despite complaints I have heard over the years that these methods are too slow and time consuming and require too much training for facilitators. The authors of this manual and their various collaborators clearly uphold these methods. Their field research has shown that they work. The beauty of this manual is that it builds upon these earlier works in the WASH sector and elaborates with photos, graphs, and charts covering what else facilitators and communities need to know to get success.

The only thing lacking in this guide is the latest information on simpler low-cost ecological toilets, such as the Arborloo and the Fossa Alterna, which are proving so popular in southern Africa. (See *Low Cost Toilets Save Lives* <www.youtube.com/watch?v=9NC5IE-1DDw>.) The information on ecological sanitation explains only one design, a raised platform bucket latrine with urine diversion. This design is expensive and difficult to build and probably unsuitable for most of rural Africa. Hopefully updated information on ecosan can be added to the next edition of this otherwise very useful guide.

In short, this guide pulls together the best that the sector has to offer in methods for bringing about water, sanitation, and hygiene behaviour change. While developed for Zambia, this manual's sub-Saharan cultural feel would likely be right for any number of southern African countries.

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Arsenic Contamination in the World: An International Sourcebook

Susan Murcott

2012, IWA Publishing, 344 pages, ISBN 978-1-78040-038-9, £145.00

(£108.75 for IWA members)

Although arsenic has been known to contaminate water resources for over a century, the discovery of large-scale groundwater contamination in Bangladesh in the mid-1990s led to an explosion of surveys and research projects. It is nearly impossible to keep up with the onslaught of findings, especially considering that important information may be found in the health, chemistry, engineering, soil science, and geological literature. Susan Murcott's new book, *Arsenic Contamination in the World: An International Sourcebook*, does an admirable job of collecting and organizing reports of arsenic contamination from over 100 countries.

In a brief Introduction, the review classifies arsenic contamination into six mobilization mechanisms: anthropogenic, coal-related, geogenic, mining, petroleum, and volcanogenic. These groups are useful, though not wholly consistent with other groupings. Natural mobilization due to alkaline oxidizing conditions and to oxidation of pyrite (in the absence of mining activity), for example, are missing.

The book summarizes arsenic occurrence by mobilization mechanism and region. However, the main value of the book is in the detailed country-wise descriptions. These chronicle the occurrence of arsenic, describe policy responses and mitigation efforts, and identify critical knowledge gaps. Murcott doesn't delve as deeply into the geological and geochemical triggers of arsenic mobilization as another recent review, *Arsenic Pollution: A Global Synthesis* (Ravenscroft et al., 2009). The *Sourcebook* is more compilation than synthesis, and so she draws upon a more diverse set of sources than *Pollution* does. Murcott has tracked down 50 pages of references including peer-reviewed journal articles and government reports, conference proceedings, academic theses, press reports, NGO annual reports, web resources, and more. Not all of these resources are equally credible, and in a few cases questionable reports are given more weight in the text than is merited.

For most countries reviewed, Murcott presents estimates of the number of people affected by arsenic. The Introduction nicely clarifies that these estimates of 'exposed' population consist of those actually ingesting arsenic. However, the very large 'exposure' figures reported for several countries (e.g. Bangladesh, India, Nigeria, and the USA) upon closer inspection reflect populations living in arsenic-affected areas, which might be better termed 'at risk'. Many of those people actually drink water from arsenic-safe sources, so overall exposure is much less than reported in the book. Estimates of arsenic-affected areas can be based on limited or non-representative data, as for Zimbabwe, in which a small number of studies of mining areas are extrapolated to an entire river basin, resulting in the improbable estimate of three-quarters of the national population being exposed to over 50 µg/L. In some cases outright errors are to blame: exposure figures for Kyrgyzstan and Vietnam are both apparently inflated by transcription errors.

Fortunately, the reader is able to check all references through the detailed bibliography – often containing weblinks – and a supplementary Excel database, freely

available on the IWA Water Wiki. Presumably this resource will allow for future revisions to the compilation, including new information and correcting errors.

Arsenic contamination affects many millions around the globe, and this book should serve as a call to action for greater mitigation of this terrible poison. Those concerned about and responsible for water safety will find the book extremely useful for quickly identifying known hazards in specific regions. Murcott has managed to dig up many obscure reports which would never turn up in most search engines, and readers can save themselves many hours of sleuthing by picking up this valuable resource. However, they should (as always) read critically, and explore the original sources Murcott leads us to wherever possible.

Richard Johnston, Eawag/Sandec

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Ravenscroft, P., Brammer, H. and Richards, K. (2009) *Arsenic Pollution: A Global Synthesis*, Chichester, UK: Wiley-Blackwell.

Interlacing Water and Human Health: Case Studies from South Asia, Volume 3

Edited by Anjal Praksh, Saravanan V.S. and Jayati Chourey

2012, SAGE Publications, 508 pages, ISBN 978-81-321-0725-5, \$42.00

Water and human health are topics that interest many as they cut across diverse disciplines. The writers of this publication, *Interlacing Water and Human Health: Case Studies from South Asia*, from SAGE publications view it from a water-resources development perspective, drawing linkages to water supply and sanitation, intensification of agriculture, rapid industrialization, increasing urbanization, and natural disasters, all of which are current drivers of change, especially in developing countries. The content is presented through a series of case studies from five South Asian countries; namely, Bangladesh, India, Pakistan, Nepal, and Sri Lanka, and covers different topics on health such as mortality, morbidity, malnutrition, infectious and burden of diseases, sanitation, and chemical and biological pollution. The authors weave in country-specific challenges from a multidisciplinary context that can be useful in integrated water resources development. The examples markedly improve the understanding of the challenges that countries in South Asia encounter and provide compelling empirical evidence towards planning for improved integrated water management processes.

The publication was conceived based on the need for training water professionals in integrated water resources management (IWRM) and gender issues in water management in South Asia. As such it is a collaborative product of water professionals from different partner institutions in the South Asian region, who engaged in a capacity building programme under the Crossing Boundaries Project funded by the Government of the Netherlands. The well-crafted chapters reflect the regional perspectives and challenges on water and human health and present a plethora of ideas for post-graduate curriculum development and practical training in sustainable IWRM. This is an innovative approach that enables learning from sharing of country

experiences, and cements collaborative linkages across institutions, strengthening the knowledge base on water resources development in South Asia. It also breaks away from the sectoral approach to learning and helps to design new programmes that align with emerging issues such as natural disasters and climate change.

It is refreshing to note that water education is presented in a novel collaborative way: by engaging country professionals who are well-positioned to assess the ground realities of water resources in their respective countries. The detailed regional descriptions help the reader to understand the intricate and complex relationship between water and health in the region and provide an interdisciplinary perspective for effective water management planning. The topics, though selective, highlight some of the neglected areas of water and health that should be taken into account for equitable economic development and social welfare of communities. A wide range of information on emerging issues and environmental implications can be well utilized by policy makers. The content may also serve as good reading material for Master's programmes in sustainable IWRM, and universities should therefore add this book to their reading lists. However, an introductory chapter on water development in education would have added value to the content.

The authors have successfully achieved the objectives of a multidisciplinary approach to understanding the linkages between water and health, through the selected case studies. The Consortium for Interdisciplinary Water Resources Studies which includes SaciWATERS, based in Hyderabad, India, should be commended for bringing out this book, which targets a multiple audience and gives a good overview of the complexities of water and human health.

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The Urban Transformation: Health, Shelter and Climate Change

Edited by Elliott D. Sclar, Nicole Volavka-Close and Peter Brown

2012, Routledge, 238 pages, ISBN 978-1-84971-216-3, £26.99

The global South is urbanizing rapidly. This book brings together a range of authors with expertise in public health, water and sanitation, housing, and climate change to explore the ways in which city planners and decision-makers can and should respond to this reality. The emphasis is on integrated action, drawing on the resources of all the players, including not least those of poor people. Gordon McGranahan's chapter on evolving health risks summarizes what we know about health risks in rapidly growing cities. He suggests that health indicators can serve as a counterbalance to economic indicators when appraising the impact of urban environmental burdens. Chapters by Trudy Harpham and Diana Mitlin provide a broad overview of thinking on health and housing finance, respectively. Mitlin contributes a second chapter on innovations in shelter finance and Sophie Tremolet, Rachel Cardone, and Catarina Fonseca provide an introduction to formal and informal systems for investing in water supply and sanitation services.

While these chapters do refer briefly to specific initiatives, their wide scope means that they cannot provide details of those initiatives. David Vlahoff and Waleska

Caiaffa provide more detailed assessment of experience with participatory budgeting, with family health centres in Belo Horizonte, Brazil. The narrower focus enables the authors to first describe the initiative, then identify some challenges, particularly that of evaluating the benefits of the approaches described. They also take the important step of identifying some cases in which participatory budgeting did not work and explore the reasons for this failure. They note that participatory budgeting depends on support from municipal government and on the extent to which that government, rather than central government, controls financial resources.

The underlying message of the book is that poor people in cities will be adversely affected by climate change and that improved governance will be required to meet the present and future needs of the urban poor. John Mutter's interesting chapter on the social and economic consequences of natural disasters and the implications for climate change responses draws on lessons from Haiti and New Orleans. The final chapter on the urbanization of climate change, by William Solecki and others must have been written before Hurricane Sandy but is prescient in identifying the risks to New York from rising sea levels and strong storm surges.

On the first page of the book, Elliott Sclar and Nicole Volavka Close note that the urban transformation holds out great promise but also the potential to make cities places divided by great affluence for a few and grinding poverty for many. The challenge is to move towards the first scenario and away from the second. Achieving the positive changes advocated in the book will not be easy. Most assume the need for improvements in governance but the reality is that urban governance in many countries is poor. Better governance needs political as well as institutional change and it is no coincidence that government systems are controlled by the rich and powerful. As Sclar and Volavka say in their introduction, many of those in positions of power have a strong desire for the poor to simply disappear. I would have liked the book to say more about the implications of this. Nevertheless, it provides a good general introduction to the actions that might be taken to create healthy cities and can be recommended for anyone looking for a general text on the links between health, urban services, and climate change.

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and shelter provision*