

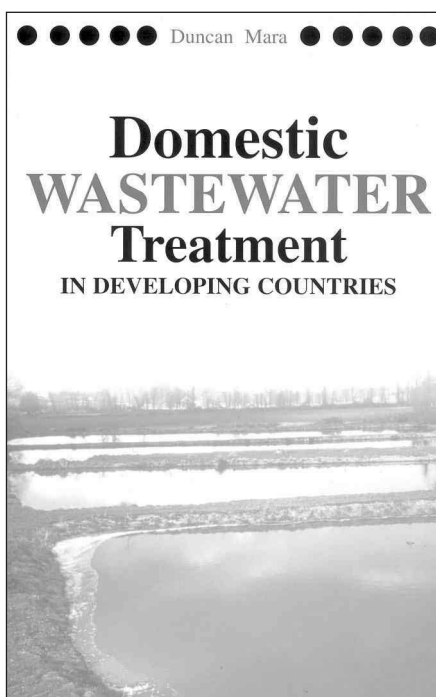
books

Domestic Wastewater Treatment in Developing Countries

Dunca Mara, 2004, Earthscan, London, Paperback £29.95
ISBN 1844070190
Hardback £80.00
ISBN 1844070204 256 pages

This book takes a new look at wastewater treatment in developing countries, useful not only for engineers but also for decision makers and regulators from the developed and developing world, to help them understand treatment needs and propose feasible solutions. Although a technical book, it has plenty of humour, which makes very easy reading. As one would expect from the title, traditional definitions are adapted to developing country conditions (for instance, maize cobs are given as an example of suspended solids in wastewater). Examples and data from several developing countries were very carefully selected not only to illustrate properly the topics and present real problems, but also to show diversity between regions and differences with the developed world. The book covers four main areas: (a) theoretical concepts, (c) development of policies and standards to properly manage wastewater, (d) appropriate treatment technologies and (d) wastewater reuse.

Theoretical concepts include historical and very recent information, not limited



to the engineering field, but also from medical, biological and agronomic disciplines. Practical information concerning the properties of pathogens and parasites, such as helminth eggs, is described.

Concerning wastewater management policies, the book clearly explains the reasons why developed countries have the policies and standards they have and why some of them are not applicable to developing countries. In doing this, the author answers many questions professionals usually have. A thorough discussion of WHO guidelines for reuse compared to other options is included, with practical suggestions to complement standards with management policies. And, by highlighting the differences, the author addresses some solutions for the developing world that are also useful for the developed world.

Concerning technology, the main emphasis is, of course (Professor Mara being the one of the leading world experts), on waste stabilization ponds. The book explains why ponds are reliable and robust low-cost biological processes very useful for developing countries in removing pathogens. Theory, design, start-up and operation procedures are described, and examples of operating ponds provide good illustrations. Also in the book, wastewater storage and treatment reservoirs (and their combination with sequential batch-fed reactors), wetlands, upflow anaerobic sludge bed reactors, biofiltration, aerated lagoons and oxidation ditches are considered. Finally, two chapters address useful topics on water reuse for developing countries – agricultural and aquaculture reuse – emphasizing the design of wastewater treatment facilities, and taking into account the expected use of effluents.

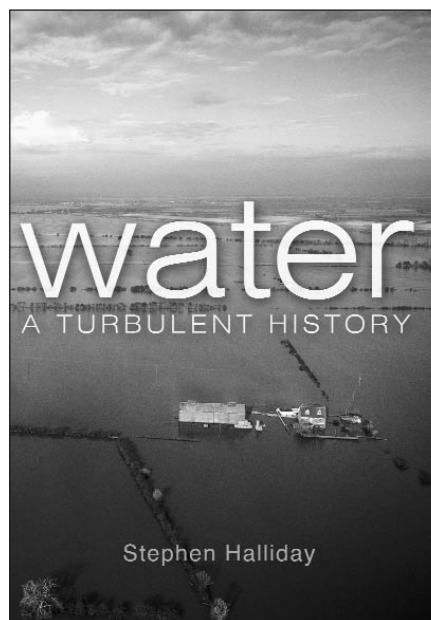
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Water – A turbulent history

Stephen Halliday, 2004, Sutton Publishing, ISBN 0 7509 3300 3, 246pp, £20.00.

This is a clear and well-illustrated book concerned primarily with the development of water resources from the seventeenth to the nineteenth centuries. It is largely concerned with the role of water management just before and during the industrial age in Britain. It has to be understood entirely in this context.

It is organized by topic, arguably the only way forward with such a complicated subject as the history of



water resources. The book opens with an account of London's water supply, including the construction of the notorious 'New River' completed in 1613, and is followed with a description of the draining of the fens, the only part of the book that deals with rural matters.

Readers of *Waterlines* will be particularly taken by the story of London's water supply and wastewater treatment problems, largely during the Victorian era. Although frequently told, if you haven't come across it before this story is worth reading because it was the focus of much problem solving in relation to water resources. There is an account of John Snow's breaking of the Broad Street pump in 1854 that noticeably reduced deaths from cholera and established the possibility of disease being water borne rather than air borne. Always mildly amusing are the problems posed to Parliament by the 'Great Stink' during the summer of 1858. Such was the stench coming from the Thames in this year that Parliament finally resolved to do something about the sewage discharges into the river. The

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controversial plan by Joseph Bazalgette involved a system of 'intercepting sewers' and pumping stations that took discharges away from the river during its passage through metropolitan London and the docks, to be released downstream at high tide.

Other chapters deal in a lively and entertaining way with such issues as the development of inland waterways, and water as power, including the interplay between hydraulic engineering and steam power (Newcomen, Watt and Trevithick all make an appearance), and the early railways. There is a brief but welcome excursion into more cultural aspects, including spas and 'water landscape and literature'.

The book might have benefited from a better title, such as *Water: A turbulent history in industrializing Britain*. It omits to deal with water in agriculture, or to include histories of water power or canals before the eighteenth century. One has also to say that the work is heavily London biased. While Liverpool is described as 'The empire's second city' there is scant reference to municipal supply and wastewater disposal problems in Birmingham or Glasgow, also crucibles of nineteenth-century water-supply policy.

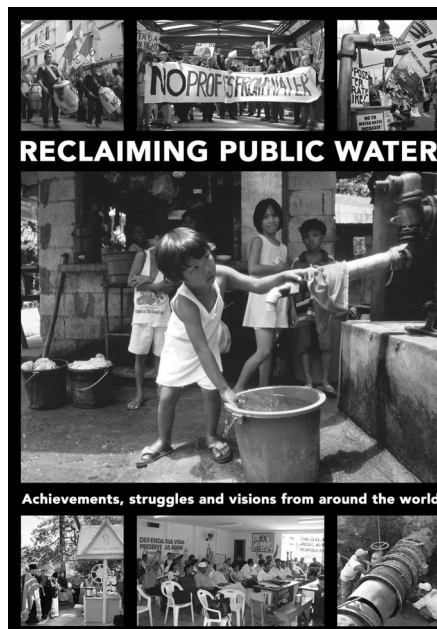
Notwithstanding these objections regarding scope, this book makes a good read, with the added benefit that a proportion of the royalties go to WaterAid.

*Hadrian Cook,
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Reclaiming Public Water: Achievements, Struggles and Visions from Around the World

Edited by Belén Balanyá, Brid Brennan, Olivier Hoedeman, Satoko Kishimoto and Philipp Terhorst 2005, Transnational Institute and Corporate Europe Observatory, ISBN: 90 71007 10 3, \$12

The story of the failure of modern societies to meet the water supply and sanitation needs of all is a sad one, with disastrous implications for poor and disenfranchised populations throughout the developing world. Our continued inability to provide these basic water services is a reflection of many things, from inadequate efforts, to misguided and misdirected approaches. Part of the challenge has been, and remains,



finding appropriate models, institutional arrangements, and methods of financing, while working with governments that may be corrupt, weak or simply inept.

The ugly and loud debate over water privatization remains a key characteristic of the water supply and sanitation challenge. The model of the 1960s and 1970s of centralized government grants and loans from large multinational funding agencies failed. It was replaced by ideological efforts pushing privatization models in the 1980s and 1990s. That model has also largely failed. But what is to replace it? One possible answer is a focus on revitalizing public water systems, but with community participation and democratic decision-making.

For that reason, this new book, *Reclaiming Public Water: Achievements, Struggles and Visions from Around the World*, is a breath of fresh air. Using positive examples from countries in almost every region of the world, the authors show how democratically based efforts to improve water services can be successful. Without claiming that one size fits all, the authors show that smart public water services, with strong citizen participation and oversight, can be effective answers. Unless the current debate moves away from recriminations and finger-pointing towards finding new models and new tools, little progress is likely to be made. This book is a step in the right direction to highlighting a broad and diverse set of successes for the rest of us to follow.

Peter H. Gleick, Pacific Institute

Blue Genes: Sharing and conserving the world's aquatic biodiversity

David Greer and Brian Harvey
2004, Earthscan/DRC
ISBN 1 55250 157 4 246 pp.
Purchase book online:
Earthscan or download for free
from <http://web.idrc.ca/openebooks/157>

The advance of genetic sciences has led to a 'blue revolution' in the way we use aquatic biodiversity. By 2020, the world will be eating almost as much farmed as wild fish, marine bacteria could yield the cure for cancer, and deep-sea bacteria may be exploited to consume oil spills. Science is moving ahead at a staggering speed, and the demand for genetic resources is growing rapidly – white governance and policy lag far behind.

This book is the first to look at the issues of ownership, governance and trade in aquatic resources. *Blue Genes* describes the growing demand for aquatic genetic resources and the desperate need to fill the policy vacuum for the management and conservation of aquatic biodiversity as a foundation for rules governing access to and use of them. Special attention is paid to the rights of indigenous and local communities providing access to those resources and their role in managing and conserving aquatic biodiversity.

The book uses six case studies from four continents to illustrate key issues. These are: The law of unintended consequences; Conserving the ornamental fish industry in Barcelos, Brazil; No policy, no access? A salmon farmer's frustrated efforts to collect genetically pure broodstock; An indigenous community says no: Negotiating access to charr broodstock in northern Canada; Genetic improvement of farmed tilapia: Lessons from the GIFT project; Community rights vs research; The Philippine experience with access and benefit-sharing legislation; and Shaping negotiation tools: A marine bioprospecting agreement in Fiji. The book concludes with policy recommendations specifically tailored to aquatic resources.