

## BOOK REVIEWS

**The sound of thirst: why urban water and sanitation for all is essential, achievable and affordable**, by David Lloyd Owen, Parthian, Cardigan, Wales, 2012, 456 pp.

It seems some have started patting themselves on the back for having achieved internationally agreed water goals. Earlier this year, a World Health Organization/United Nations Joint Monitoring Programme report stated that the Millennium Development Goal for water connections was achieved in 2010 (UNICEF/WHO, 2012). However, of the people reportedly enjoying improved household tap water, 200 million rely on bottled water to cover their needs and around 1.9 billion more still depend on unsafe water for drinking.

We are still considerably far away from providing universal access to water, and even further away from becoming water secure. But water gets at least some attention. The situation is dire when it comes to sanitation and sewage, which receive negligible consideration, let alone support. Regardless, and in spite of the attainment of certain development targets, billions of lives are still being stunted. And yet, responses have been insufficient and slow.

The physical and institutional infrastructure for water and sewerage is poor everywhere in the world. Unsurprisingly, large investments are needed to provide these services. But where can we start building a case for resources to be channelled towards providing universal access to water and sanitation? More importantly, how to change the demonization and idealization of certain stakeholders and dismantle myths about users' willingness to pay for reliable, safe and high-quality water services?

In *The Sound of Thirst*, David Lloyd Owen has disentangled many of the threads, interests and actors that make water management a convoluted issue. Development, health, economics, power, innovation, efficiency, justice, entitlements, technology, ethics, philosophy, theology, anthropology and history are merged into a pragmatic case that can help mobilize the political, financial and human resources required to ensure universal and sustainable access to safe water and sanitation. Problems, difficulties, challenges, obstacles and exemplary past failures are unapologetically included, but so are the different available alternatives and the actors who can play a pivotal role in bringing them about. With such a comprehensive scope, experienced water professionals, policy makers, entrepreneurs, development enthusiasts, academicians, researchers and general readers are bound to find enough food for thought and details to quench their thirst for water-related alternatives and solutions.

In this ample and extensive book, Owen has made an extensive and gripping case for investing in water and wastewater, emphasizing the remarkable returns that are sure to be generated in terms of human health, wealth and happiness. He has pushed the water debate beyond traditional boundaries – and also past the clichés, misconceptions, prejudices and reservations which have often been the culprits leading to an array of suboptimal answers to the water needs faced by the world and its inhabitants. The result is a sound and compelling case for putting in place sensible, practical and not-for-free policy solutions on water and

sewage that place at the core the people who are poorly served or not served at all. This work draws attention to the urgency of abandoning ideological fixations regarding pricing and fee structures, reminding readers that challenges and responses are localized, as illustrated by the infrastructure and management betterments in countries as different as Cambodia, Chile, India, Japan, Malaysia, Singapore, South Korea, Uganda and the United Kingdom.

From an attention-grabbing title to engaging anecdotes and brief, yet insightful, discussions on issues such as erosion, pollution, food security, conflicting interests and rights, misleading and modest achievements on the Millennium Development Goals in Sub-Saharan Africa, the role of the private sector in the water sector and the boom of bottled water, *The Sound of Thirst* transmits a particular concern for soaring population numbers and sprawling urban areas. To Owen, urbanization and concepts such as 'urban' and 'urbane' evoke images of places of cheerful chaos and the cause behind self-inflicted difficulties with urban water management.

And this chaos, when added to population growth, is eating away any progress attained in providing access to water and sanitation around the world and is responsible for supply-demand imbalances, particularly in fast-growing developing countries. For instance, between 1990 and 2008 those with access to improved sanitation rose by 701 million (to 1629 million), but those left out rose by 268 million. Regarding access to improved water, numbers rose from 925 million to 2252 million, and yet 44 million were left behind. Moreover, and in the same period, 1000 million more people had access to household water but 233 million were left without a household tap. Population growth is held accountable for supply-demand imbalances, mainly when huddled up in urban areas.

Megacities are defining the political, social, economic and environmental landscape in developing countries. By 2050, 22 out of 29 megacities will be in developing countries and there will be 546 cities with at least one million people. In a century, Africa's urban population will grow 37-fold and there will be around 3.15 billion more urban dwellers in Asia. But this urban sprawl is far from being planned. Slums are growing by 70 million people a year as a result of rural-to-urban migration. In Sub-Saharan Africa, 72% of the urban population lives in slums, and in South and Central Asia this number reaches 58%. Unsurprisingly, the pace and scale of urbanization overwhelm connection initiatives whilst calling for significant infrastructure spending. Furthermore, urban areas exacerbate the impact humanity has on the water cycle, creating an impact zone that extends beyond each town and city.

But the need to reconcile availability with supply reliability and an ever-increasing population, and their new expectations and dietary requirements, does not have to organically lead to Malthusian worries, some of which are addressed throughout the book. Positive developments, too, can come from urbanization and an expanding number of individuals. Along with effective public policies, periods of heightened population growth and a drop in dependency ratios can lead to a demographic dividend, facilitating more rapid economic growth and putting in people's hands the resources and bargaining power they need to demand the services they need. In the past, countries have avoided demographic traps and opened up demographic windows to boost growth. Demography need not be destiny. In the same light, big cities can generate powerful economies of scale, bringing about substantial productivity increases. Populous cities have the potential to unleash human drivers of change and tackle infrastructural deficits.

According to the author's calculation, \$7.1 to 8.7 trillion is required to expand, extend, maintain and upgrade services. These are real, rather than ideological, needs. Unlike what is portrayed in the media, pushed for by NGOs, spoken about in big development summits and reported in utilities' reports, people continue to have practical, rather than ideological,

concerns and needs when it comes to water and sanitation. Mixed messages conveyed by the development community, the media and other stakeholders have often meant that neither sufficient nor compelling solutions have been formulated or implemented. Consequently, potential actors (read the private sector and often the users themselves) have been categorically excluded from taking part in the water dialogue, which significantly limits the real array of alternatives available for tackling water challenges and seizing opportunities.

Yes, it is true that 2.4 million people die from waterborne diseases every year, but it is also true that something can be done about it. Old technologies could be revived and neglected resources such as wastewater could be mobilized. More controversially, the debate could, should, and has to further the participation of private and even corporate actors. For those who loathe the private sector and who see it, along with investment and financing, as the sheer incarnation of evil, this book makes a simple invitation: drink a glass of poor-quality water and think again whether we have the luxury of excluding important players on ideological grounds. It is time to move ahead, and away from prejudices and clichés. Sometimes governments can do a good job, sometimes it is the private or non-for-profit sector, sometimes it is none of them and thus we have small entrepreneurs seizing the available opportunities. Attacks on private-sector participation for the sake of ideology should stop; instead, make these stakeholders perform better and become a force for good.

Unsurprisingly, the private sector will be key in financing the spending and investment gap. For this, banks and investors ought to look at the opportunities presented by a new wave of environmental concerns, and seize the market opportunities that come with them. For instance, spending on municipal water and sewerage infrastructure is often a low-risk investment that provides exceptional social as well as economic returns. Revolving credit facilities, bonds, tariff-repaid funds, loans given by development banks, and pooled finance mechanisms are also alternatives. Alternatively, non-for-profit models can drive down operating and financing costs and customer bills, meeting customer service and environmental obligations.

Engaging the private sector brings about plenty of experiences to learn from, both successful and faulty. Cases from both developed and developing countries where the private sector has played a role could provide useful pointers as to how to improve funding and management schemes, collect revenues, cut down on overstaffing and reduce unaccounted-for water. In Europe, private sewage treatment has driven down capital costs by 15 to 40%. In Bolivia, Cochabamba has become the quintessential example of how not to develop and implement a concession; meanwhile, in El Alto, water and sewage connection costs fell by 40% when, between 2000 and 2002, Suez employed local labour to manage a concession to develop a sewage treatment system. For its part, Uganda has taken on making the National Water and Sewerage Corporation a self-funding utility, which has led to a rise in the number of metered connections and billing, and a UGX9.4 billion profit in 2010.

And yet, this important debate on the role of the private sector could still have taken on issues of inclusiveness, and the necessity of building strong public and private institutions, increasing accountability and deepening public scrutiny. More often than not, politics do take over policies, and as he himself points out, water management has become a proxy for other people's conflicts. Corruption in the water sector has reportedly distorted costs by 10 to 40%, according to Transparency International (2008). Policy is not apolitical, and failing to acknowledge the extent to which this is the case will hamper any effort to take better measures.

Now, if challenges are ample for water, they are even greater when it comes to sanitation. In developing countries, sanitation investment rates are perhaps one-quarter of the amount for drinking water. This has caused widespread ‘euphemasia’, or people dying of neglect when an awkward subject gets avoided. Sanitation’s five F’s (faeces, fingers, flies, fluids and fields) have traditionally drawn euphemistic responses despite the 1.4 million children and 100,000 adults who die from diarrhoea every year, and the 860,000 who die from malnutrition brought about via waterborne diseases. It seems we have forgotten, if not neglected, that privacy and dignity are part of people’s aspirations.

The lack of access to water and sanitation also extracts huge opportunity costs from single individuals and communities. In developing nations, 10% of disability-adjusted life years (DALYs) stem from water, sanitation and health shortcomings. For those living under \$2 per day, illness costs them \$38 billion every year. Achieving the Millennium Development Goals would avoid 30 million DALYs, and universal (98%) access to water and sanitation, around 585 million more. In 2004, the WHO estimated that a \$11.3 billion yearly investment in water and sanitation would generate a total payback of \$84 billion from improved productivity, freed-up time, averted deaths, health care savings, and improved school attendance.

Solutions are at hand, and plenty can be done about such life and productivity losses. For instance, shedding light on the causality between diseases and poor sanitation makes for a stronger case for sewerage, especially since public investments for sewerage will always be a far greater challenge than for water. We have belatedly realized that sewage treatment and management can provide benefits that far surpass incurred costs. A change of mind is needed. Wastewater is not just pollution; in fact, it is a neglected resource, because it abounds with energy and nutrients and can be transformed into a major source of urban water. Sustaining the integrity of the water cycle is no luxury. Nevertheless, natural capital and environmental services are taken for granted. In paying for erosion protection, filtration systems, transpiration, distillation, breaking down of organic matter, water retention, wastewater absorption, and habitat restoration services we could be looking at \$1226 billion in 2008 (2.04% of global GDP) and \$4702 billion in 2050 (2.92% of global GDP).

Owen enriches the demand side of the water-and-sewage debate by awarding a more proactive role to users, starting by acknowledging people’s willingness and ability to pay for services and goods they value. In developing countries, mobile phones have acquired universal status and people willingly pay for them. Water and sewerage services should not be, and are not, any different – except that burdens fall disproportionately on the poor, who end up paying more for poorer-quality services. When a municipality does not supply water or sewerage, the poor will then resort to vendors or local entrepreneurs, to whom they will pay up to 240 times more for their water than the wealthy pay in the same city.

And yet, some poor societies can leapfrog in water delivery service, and have done so. Take the case of Phnom Penh, a city that transformed its service delivery, simplified payments, revised tariffs, improved water quality, increased coverage area, and reached 24-hour daily delivery. This “water for all” programme has now reached 90% of the city’s population, including its poor, who are offered connection and tariff subsidies and who as consumers are now empowered to demand better services. Tariffs, taxes and transfers – the three T’s – can be used jointly as part of a sustainable cost-recovery model.

This offers a powerful lesson. Users can do more to demonstrate willingness to pay for services, start acting as stakeholders, highlight poor services and denounce corruption. At the national level, consumers’ initiative can awaken political indifference and stop the declaration-oriented approach international water mega-conferences have followed in

assessing where we are now, where we want to go and how much it is assumed users are not willing to pay. This will require shaping consumers' attitudes, building trust between utilities and users so that fees are accepted and enforced, and gathering and publicizing relevant information and data.

This prompts an invitation to embrace the information age. But maybe it is not too ambitious to also call for embracing good governance and capacity building where reasonable political and regulatory frameworks are in place. Skills need to exist and be furthered. Regulation ought to be overhauled to bridge the chronic and conflicting gap between a city's perceived short-term 'termism' and the sector's long-term needs. Better governance systems have to provide incentives encouraging companies to concentrate on efficiency and to meet new challenges in a cost-effective manner. Pricing can be used to promote equity, efficiency and sustainability.

One such challenge is climate change. However, Owen's fierce criticism of sceptics and denial activists overlooks some more of the subtle reasons that mitigation measures are to be painstakingly questioned. Analogously to other development issues of worldwide consequence, climate change has come to be used as a proxy for political power, patronage, economic supremacy, technological innovation and pioneering, claims over new resources, the distribution of responsibility, industrialization history, development patterns, etc. In reading this and any other thought-provoking piece, readers should not forget that numbers are seldom just factual evidence. How and by whom the data were obtained will have implications that should not simplistically be seen as apolitical, asocial, acultural or ahistorical.

However, a sense of looming doom is to be avoided. There are plenty of examples of good governance and innovation in making water management universal and sustainable. In recent years, the pace of innovation has been greater than ever during the history of water and wastewater management. Between 1990 and 2004, agricultural water efficiency improved 1% per annum, new toilet technologies are more water efficient, and cases such as Singapore show how it is possible for a country, city or community to go from open defecation, shortages and standpipes to a comprehensive, universal and integrated water and sewage management system. We should aim at encouraging more communities to use water strategically to foster their emergence as truly developed economies and places. Success will then depend on acknowledging the importance of water and addressing challenges in a holistic way, linking services, economic development, well-being, health and growth – that is, to set the right priorities and assure consistent political support.

Similarly, there are plenty of good practices to improve services, for example by integrating water and sewage management; identifying high-quality and good-value work; and incentivizing demand-led management. Bettered policies can also be the result of actively pushing to bring about stakeholder involvement and public support to pay appropriate tariffs; or by putting in place appropriate, predictable and affordable funding schemes. Likewise, capacity building and information exchange can contribute to more straightforward, communicative and effective relationships between governments, utilities and regulators. Such initiatives can help to eliminate corruption, inefficiency and malpractices; to avoid political interference; and ultimately to push for efficiency, affordability, sustainability and universal access.

With *The Sound of Thirst*, David Lloyd Owen seeks to encourage people outside the business of water and wastewater to take their management more seriously. Politicians, academics, private-sector and utility managers, industrialists, agriculturalists, and individuals needing and looking for a bracing reminder, reaffirmation, confirmation or conversion on the things we should worry about when it comes to water and what can be

done about them can stop the search now. Armed with this book, readers can assess those challenges and opportunities, and much more, as well as learning one or two witty facts about history, geography, engineering and culture.

## References

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<http://dx.doi.org/10.1080/07900627.2012.720198>

**Water and Sanitation Services: Public Policy and Management**, edited by José Esteban Castro and Léo Heller (Eds), first published 2009 by Earthscan, UK and USA, and reprinted in paperback 2012 by Routledge, Abingdon, UK, 392pp. ISBN: 978-1-84407-656-7 (hb); 978-0-415-50703-5 (pb)

José Esteban Castro and Léo Heller's *Water and Sanitation Services: Public Policy and Management* is a valuable collection of case studies and theoretical discussions that extract key principles from this complex and hotly debated field. The editors' aim is to build a more interdisciplinary body of literature that encourages a shift away from a techno-centric focus. They also seek to bridge the gap between the policy and management dimensions, to which they attribute an inhibiting divide in the sector. Packed with accessible, current and historical examples from both developing and developed countries, the book effectively achieves its objective to "provide support for policy design and planning in the interfaces between WSS [water and sanitation services] and other interlinked areas of activity such as public health and water resources management" (p. 4). It does this without being overly prescriptive, even allowing contradictory evidence to stand, although, from the outset, the authors firmly defend their stance on the necessity of public-sector investment and ownership for universalization of services. The case studies underscore widely noted, but often ignored, key principles: there are no "one-fit solutions" (or perhaps more accurately, no countries successfully use the exact same policies and management); and WSS policies and management must address systemic conditions. These themes are well supported by clear examples, making the book an excellent reference for those engaged in water and sanitation policies and management.

The editors begin by challenging the potential of mainstream policy and management approaches since the 1980s (those largely informed by market-principles and decentralization) to achieve universalization of WSS. The reality of failed policies is apparent in the 2.5 billion people lacking access to improved sanitation and the more than 780 million lacking access to safe drinking water (WHO/UNICEF Joint Monitoring Programme for Water Supply and Sanitation 2012). A key assertion in their argument is that WSS must "constitute a social right of citizenship" (p. 4). In Chapter 2, the always