

# CLOSING THE GAPS: IMPROVING THE PROVISION OF WATER AND SANITATION

By Charlotte Youngblood and Geoffrey Dabelko

**W**ater Stories: Expanding Opportunities in Small-Scale Water and Sanitation Projects outlines a range of approaches that are helping close gaps in water and sanitation coverage. Rather than focus on traditional large-scale projects, Wilson Center working group members investigated small-scale and under-researched approaches and stakeholders, including communities, NGOs, and the media. *Water Stories* suggests that these approaches and stakeholders are more than marginally important in expanding coverage—they are critical.

The research, site visits, and dialogue commissioned and conducted by the Wilson Center’s Navigating Peace Initiative revealed many insights, including the need to:

- **Invest in community-based and small-scale approaches** in water and sanitation. Such efforts have shown significant success to date and warrant renewed and more regular attention; to meet water needs in a sustainable way, development portfolios must be diversified to include community-based and small-scale approaches. Effective diversification and implementation will require systematic research and communication.
- **Increase funding for sanitation, especially small-scale projects.** Sanitation has been severely under-funded and is still a “taboo” topic in some development circles. The

international development community should not only increase funding for sanitation programs, but should also consider systematically supporting and implementing small-scale sanitation programs that sustainably and safely dispose of waste, as well as take advantage of its potential for reuse.

- **Use the media and communication tools to catalyze political will to address water and sanitation problems.** Communication efforts could help translate research results and lessons learned into information that communities and donors can use to implement safer, more effective, and sustainable programs. The media could help increase public participation, which also plays an important role in garnering political will.

## COMMUNITY-BASED AND SMALL-SCALE APPROACHES: GETTING BACK TO BASICS

In the global environmental field, a perceptible shift toward viewing the world as an interconnected whole has led to better-integrated approaches. In sanitation, for example, there is a growing interest in “closed loop” solutions such as ecological sanitation, which reuses waste. As we recognize the potential for reusing our resources, we also start to see the potential for reusing our knowledge base, informed by centuries of experience in communities worldwide.

Concepts such as “community management” and “participatory approaches” are not new. Community management has often been a central organizing factor in societal decision-making, and community management and participation have appeared in development discourse since at least the 1960s. Throughout the 1990s and up to the present, community management has been a key underlying principle of water and sanitation programs; it was even identified as a guiding principle of Agenda 21, the comprehensive sustainable development plan adopted at the 1992 Earth Summit in Rio de Janeiro.

Although community management and participation have long been identified as important factors, many community resources remain untapped. As John Oldfield points out in “Community-Based Approaches to Water and Sanitation,” many age-old methods may still be extremely effective: “Rainwater harvesting is a millennia-old method of meeting water supply needs. Yet many of the NGOs surveyed suggested that rural villages should take a new look at this proven practice. Its benefits include lessening the stress on groundwater tables, drastically reducing the need to treat water, and solving the problem of many rural communities whose traditional water supplies disappear during the dry season” (Oldfield, page 54). In meetings with foundation representatives in Mexico City in February 2005, the Navigating Peace working group learned that foundations had been implementing water projects in Mexican communities for years before they discovered that community “water councils” could provide critical information about land and culture that could help make the projects far more successful (Deborah Barry, personal communication, February 2005).

It is also important to consider the scale of projects. While there is avid debate about “large” vs. “small” projects, we lack the information necessary to evaluate the potential of a range of small-scale programs. As Oldfield points out, “While a great deal of literature addresses the challenges of small-scale, rural projects on water, sanitation, and hygiene, there is a dearth of accessible research bringing together the work of multiple organizations, highlighting the strengths and weaknesses of differing approaches to the task” (page 40).

In “Household Water Treatment and Safe Storage Options in Developing Countries,” Danielle Lantagne and her co-authors examine one category of small-scale interventions, looking at five household water treatment options—chlorination, filtration (biosand and ceramic), solar disinfection, combined filtration/chlorination, and combined flocculation/chlorination—and evaluate their respective strengths and weaknesses. They conclude that household water treatment and safe storage (HWTS) systems “are proven, low-cost interventions that have the potential to provide safe water to those who will not have access to safe water sources in the near term, and thus significantly reduce morbidity due to waterborne diseases and improve the quality of life” (Lantagne et al., page 34). Accurately assessing the appropriateness of HWTS systems, however, requires further research, including performing health impact studies; developing performance measures; investigating the economic considerations needed to scale up; and determining the optimal combination of HWTS options and other water, sanitation, and hygiene (WASH) interventions (page 33).

Donors will need to adapt their financing mechanisms to support small-scale, community-

based efforts. Funding generally favors water over sanitation, middle-income countries over the poorest, and large-scale infrastructure over small-scale solutions. As the introduction notes, “Of the total aid in 2000–2001 [to developing countries], only 12 percent was given to countries where less than 60 percent of the population had access to an improved water source” (Herron and Dabelko, page 3). Moreover, although the importance of behavior has been identified time and time again, especially for improving hygiene, only 0.2 percent of official development assistance in water and sanitation went to education and training. Such funding biases persist despite the evidence supporting the effectiveness of small-scale, participatory projects.

#### **SANITATION: TIME TO CLEAN UP OUR ACT**

The “taboo” on sanitation has led to unmitigated disaster. While the international development community tiptoes around it, the World Health Organization and UNICEF suggest that performance will have to increase 90 percent by 2015 to fulfill the Millennium Development Goal(s), which will still only reach half of those lacking sanitation (Herron, page 59). The international development community, in partnership with governments, the private sector, and civil society, can no longer afford to underplay the role that waste management plays in community health and dignity.

Although discussions of the importance of sanitation have noticeably increased in international fora, sanitation has yet to receive adequate attention or funding. Most funders show a significant bias toward large-scale projects; in “Low-Cost Sanitation: An Overview of Available Methods,” Alicia Hope Herron points out that “most of the World Bank’s portfolio of \$2.6 bil-

lion—the largest in the field—funds ‘traditional’ sewage and wastewater treatment operations for urban populations” (page 59). Yet, traditional, large-scale sewage treatment options will not be viable for many of the underserved populations. “Since 2 billion of the 2.6 billion people lacking sanitation live in rural areas, we must complement large-scale urban investments with low-cost, on-site technologies that target rural communities (UN Economic and Social Council, 2005)” (page 59).

Luckily, a variety of viable, innovative, and effective small-scale sanitation options are available, including those that take advantage of nutrient-rich waste for agriculture and aquaculture, and those that utilize methane gas byproduct as fuel. However, Herron notes the danger of poorly designed or implemented systems. A complex set of variables—including climate, geology, and culture—must be assessed to prevent serious damage to community and environmental health, and to ensure efficacy and user acceptance: “It is not enough to provide a sanitation facility; a great deal of care must go into the ‘soft’ aspects of a program, as successful low-cost sanitation systems must adapt to local cultural traditions and have clear project management” (page 65).

#### **MOMENTUM THROUGH MESSAGE: A NEW PARADIGM**

Public understanding of water and sanitation challenges is critical for actions to be effective. As J. Carl Ganter observes in “Navigating the Mainstream,” people tend to “take water as a given” (Ganter, page 73). Until those who have access to water and sanitation begin to take the problem seriously, it will be very difficult to garner the political will necessary to move forward.

Ganter outlines a key role for the media: by more effectively telling stories about water and sanitation, they could catalyze action. He also notes that the “water message” poses a problem for journalists: water and sanitation do not lend themselves to “sexy” storytelling. Yet, the stories must be told—and told well—to mobilize the public, and, in turn, leaders of all stripes. According to Ganter, we just need to find the right “hook”: “The news media thrives on compelling content.... Truly imaginative and extraordinary events that speak to the ‘adventure’ of confronting water challenges are powerful opportunities for awareness” (page 78).

Ganter quotes Jared Diamond: “We don’t need new technologies to solve our problems; while new technologies can make some contribution, for the most part we ‘just’ need the political will to apply solutions already available” (page 72). As Ganter points out, the communication challenge is larger than media alone: “Making water stewardship a mainstream concern of the global community requires nothing short of a new paradigm for social change. This paradigm must both recognize the needs—and unite the strengths—of citizens, leaders, NGOs, and the news media” (page 77).

### MORE WAYS FORWARD

- **Do not exclude “traditional” stakeholders:**

*Water Stories* chose to focus on non-traditional projects and stakeholders. However, the importance of more traditional stakeholders, especially governmental actors, cannot be overstated. In policy design, funding, implementation, and long-term sustainability, local and national government involvement are critical to long-term success. In addition, the private sector,

although also largely outside the purview of this publication, plays unique roles in funding and implementing projects. Further research on both governmental and private sector involvement is required to systematically address the vast gaps in provision.

- **Integrate environmental impacts:** Every water and sanitation decision has an environmental impact, which is often forgotten in program design. Sustainable, long-term projects must integrate environmental impact; good examples include Integrated Water Resources Management and Ecological Sanitation programs, which attempt to combine social as well as environmental perspectives. Further research into these and other methods will help programmers effectively design integrated approaches.
- **Approach water, sanitation, and hygiene holistically:** Integrating water, sanitation, and hygiene programs is also important. As Herron points out, “few case studies point the way forward” (page 66); further research in integrating water, sanitation, and hygiene programs in poverty alleviation and environmental protection is desperately needed.

### CONCLUSION: TAKE ADVANTAGE OF THE UNPRECEDENTED OPPORTUNITIES TO EXPAND COVERAGE

“It is not easy: sustainable development for water, sanitation, and hygiene requires thoughtful design, well-managed project implementation, and extensive local capacity building,” Oldfield observes (page 39). On the other hand, as the UN Development Programme stated in its 2006 report *Water Supply and Sanitation for All*, “expanding water and sanitation coverage is not

rocket science; it requires neither colossal sums of money nor breakthrough scientific discoveries and dramatic technological advances” (page 6). Closing research and communication gaps and investing in a variety of methods, financing mechanisms, and stakeholders will go a long way toward full coverage. Building on a strong foundation, a coalition of actors must revisit “old” ideas—and add more funding, modern communication channels, and innovative technologies—to expand access to safe water and sanitation.

While there is no “silver bullet” to magically expand access to safe water and sanitation, the challenge offers an unprecedented opportunity for a range of cost-effective, cooperative solutions. Expanding coverage will require considerably more funding than is currently available, yet we can see results from programs with extraordinarily low costs. It will take technological advances, yet sometimes technology will not be necessary at all. It will benefit from market-based incentives and private-sector investment in some areas, government funding in others, and in some cases, from community-based strategies that need no government or private sector participation. Widespread public mobilization will undoubtedly help build political will, yet much can be done now, even as we work to build broader social awareness. We have the necessary tools. Our challenge is to use them better.

## BIOGRAPHIES

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