

The human toll from impure water, in illness and mortality, is steep. In 1993, nearly four million children under age 5 in the developing world died from diseases caused by polluted water, says UNICEF. A billion people drink unfiltered water taken from rivers or lakes into which human or animal feces has been discharged. Even more people, 1.7 billion, have no adequate sanitation.

The shortage of quality drinking water is often directly related to the failure to treat wastewater. The World Bank cites estimates that the amount of water made unusable by pollution nearly equals the amount used in the world economy.

Are there realistic prospects for doing something about water quality? I believe so. Several fundamental changes in recent years have encouraged me to think there are new opportunities in the water sector.

Water and Economic Growth

First is the transformation in the way water is seen in relation to economic growth. The huge social and economic cost of bad water is now recognized. Consider the economic damage associated with masses of people suffering chronic, debilitating diarrhea. Consider the cholera epidemic that swept Latin America in the early 1990s, killing 11,000 people and sickening a million or more.

Consider also how new industries are constrained by a lack of usable water. In developed countries, industry uses more than 40 percent of total water withdrawals versus 10 percent in developing countries. If pollution is not controlled in these countries, and water consumption not regulated, clean water becomes even scarcer.

Second is the reaction of people worldwide to the mismanagement of their water resources. As populations increase, particularly in urban areas, water restrictions have provoked anger. The advent of democracy in many places has provided an outlet for people to press these grievances. The number of nongovernmental environmental groups in Latin America and elsewhere has exploded over the past 15 years. Even when Brazil and Chile were under military dictatorships, environmental organizations were allowed to form. Many formed around water issues.

Furthermore, a growing number of more affluent households are demanding better environmental quality. Princeton University researchers found that developing country pollution levels typically rise along with per capita income. When income reaches about \$4500 per person, pollution levels trend downward in response to political pressure and to investments in pollution control.

New Flow of Capital

A third phenomenon elevating the priority afforded to water is market-place enterprise. Since 1990, private capital flows from the industrialized to the developing world have grown dramatically, from \$40 billion at the start of the decade to nearly \$250 billion today.

A market-based system does not inevitably revamp the institutional structure that governs public services. Yet a national debate about attracting capital, modernizing the economy and reducing inefficiency leads eventually to a focus on infrastructure and ways to improve it. Privatization of telephone and power services at least prompts new questions about attracting funds to other capital-starved services, and water infrastructure is typically among the most egregiously undercapitalized.

So the fourth—and perhaps the most promising change that bodes well for achieving clean water—is privatization of key aspects of water supply and sanitation, such as we see in Buenos Aires, Budapest, Manila, and Mexico City. The case for accommodating a substantial role for the private sector in building and upgrading water systems is persuasive.

There is, first of all, a huge need for capital. The World Bank projects that over the next decade the developing world will need about \$600 billion or more to augment water reserves and meet water quality needs. Developing countries will have to come up with 90 percent—from central budgets, price increases, and private investments—even while the water sector competes for capital with power, transport,

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telecommunications, and other infrastructure.

Funding Shortfall

Public funds to meet demands on the scale needed fall far short, as a result of nations' financial woes, budget deficits, high indebtedness, or policies to reduce public spending. The latter led Britain and Argentina to privatize their water supplies. Although local capital markets are developing in many emerging countries and showing some interest in infrastructure stocks, locally generated capital will not come close to meeting the need for water investments.

International finance organizations—recognizing the large demands and conscious of their own limited funds—increasingly promote the mobilization of private capital to invest in infrastructure. Partly in response to the advice of the World Bank and others, public-private partnerships have become more familiar. The experiences in the United Kingdom and in Argentina also suggest that different approaches offer advantages over more traditional, exclusive public dominance of the water sector.

Private sector solutions are confirming expectations in terms of optimizing capital expenditures, avoiding limitations on public indebtedness, attending to preventive maintenance, introducing new technologies, reducing leakage, improving service, collecting water bills, and recouping costs of service.

In fact, the long years in which public bureaucracies exercised a monopoly over the provision and treatment of water were characterized in country after country by overstaffing, undercapitalization, poor maintenance, high leakage, and inefficient collection of tariffs. Privatization has created the prospect of bringing new capital, greater efficiencies, and new technologies into the water sector.

Investment in Infrastructure

For four years during the Bush Administration, I advocated an Executive Order encouraging the privatization of publicly owned wastewater treatment plants. The order was signed by President Bush toward the end of his term and confirmed by President Clinton in 1993.

I promoted privatization because I saw the tremendous need for capital expenditures to upgrade 20 to 30-year-old sanitation systems. I saw the competing demands on public investment and borrowing. I believed the private sector would bring new technologies to bear, and do so more cost-effectively than public bodies could. I believed private enterprises would more likely keep costs under control in systems where water prices had risen faster than the rate of inflation, as was happening in many American cities.

About two years ago the first privatization of a publicly owned treatment plant occurred in the United States. Several U.S. cities have since engaged water operators to undertake major new investments and improve treatment facilities.

Paying for Services

Objections to privatization have surfaced, of course. The philosophy of privatization is that users must pay the full cost of services, and providers and investors must be allowed a profit. Both represent somewhat recent conversions in many countries.

But anxieties about excessive rate increases or about the special problems of the poor post-privatization appear misplaced.

Control of leakage, more efficient staffing and a higher rate of collections have resulted in rate reductions after privatization of water supply in Buenos Aires. Studies in several cities - Tijuana, Jakarta, Cairo — have documented that the poor in developing countries often pay several times more for water, which is purchased from truck vendors, than does the middle class.

Layoffs is another concern. It is not uncommon for a private operator to realize productivity improvements involving a 20 to 30 percent reduction in staff. That is a major source of achieving efficiency. An explicit understanding of anticipated staff cuts and the consequences for employees is essential at the outset for a privatization to realize its potential.

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Over time, transparency and consistency of government policies in bidding auctions and related matters will also be critical to realizing the promise fully. Repudiation of commitments after funds have been expended will chill investors' enthusiasm, divert capital to less risky areas, or result in greater costs. Governments, too, must accept their responsibility for setting standards, monitoring compliance, and enforcing requirements. A strong private sector role demands strong, sophisticated government oversight. One without the other is insufficient.

Providing good water and sanitation to those without them deserves the highest priority we can afford it. Privatization as a strategy offers unprecedented opportunity to make real progress, and I am pleased to say a good start, a very good start, has been made.