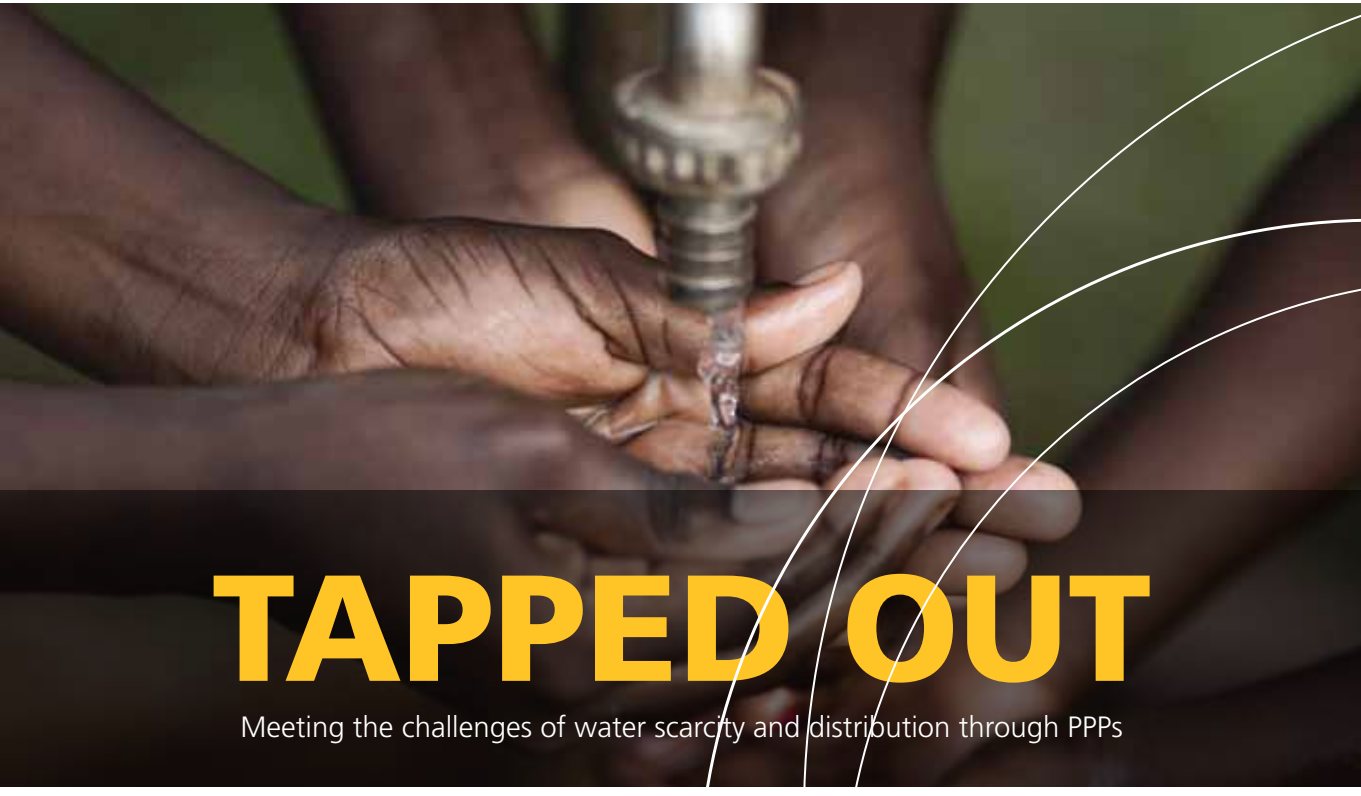
handshake

IFC's quarterly journal on public-private partnerships

In this issue



TAPPED OUT

Meeting the challenges of water scarcity and distribution through PPPs

Issue #1 | March 2011 | ifc.org/ppp

IFC International Finance Corporation
World Bank Group

handshake

IFC's quarterly journal on public-private partnerships

IFC Advisory Services in Public-Private Partnerships

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From IFC

IFC is in the business of improving people's lives.

It's not always easy to remember this in the intricate details and complicated logistics of the transactions we advise. Only by humanizing each initiative can we be reminded of our mission. That's where *Handshake* comes in.

Handshake's goal is to show how public-private partnerships can bring practical, innovative solutions to complex global problems like water scarcity, climate change, access to quality healthcare, the complications of urban development, and countless others.

We hope these stories will help stimulate discussion on how we can all help implement sustainable solutions, and we look forward to your feedback.

Laurence Carter, Director
IFC Advisory Services in Public-Private Partnerships

As I was reading my two girls *The Water Hole*, a rather unusually insightful children's book, a particular bit of reptilian dialogue made us laugh and think. Nine tortoises are lumbering around an ever-diminishing water hole, looking for a drink, when one says, "Okay, which of you wise guys hid all the water?" Predictably, the ending is a happy one—the tortoises' problem is solved simply when the rains come and the water hole is filled. If only life imitated art.

Handshake, the new quarterly journal from IFC Advisory Services in Public-Private Partnerships, addresses complex real-world problems that are not quite so easily solved. Our first issue, "Tapped Out," explores the pragmatic and innovative solutions that the public and private sectors create together to tackle the challenge of water scarcity and distribution.

Future issues of *Handshake* will address a wide range of sectors and themes. Throughout, we will give our readers insight into our world—the emerging markets—with **readable** news and analysis, **relatable** challenges and solutions, and **replicable** transaction structures that examine the real people behind the projects: those who benefit and those whose handshakes seal the deal.

Your thoughts, suggestions, and contributions will enrich this conversation. Please email your feedback to handshake@ifc.org.

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In this issue

FEATURES

SMALL-SCALE WATER

PPPs in practice
Small-scale water infrastructure program: Uganda | 18

Partner spotlight
GPOBA | 21

Lessons from the field
Private small-water supply systems | 23

Private-private partnerships
WaterHealth International | 24

INTERVIEW

The industry behind the tap | 26

IRRIGATION

PPPs in practice
Pontal: Irrigation in northeast Brazil | 34

Partner spotlight
InfraCo & PIDG | 38

Master Class
PPPs in irrigation eLearning | 39

Private-private partnerships
Jain Irrigation | 40

COLUMNS

PERSPECTIVE
Insights & opinions
Water, water everywhere | 04

COMPASS
Surveying the PPP landscape
10 years of water PPPs | 08

MYTHBUSTERS
Challenging accepted truths
5 common misconceptions about water | 13

MONEY TALKS
Financing and funding PPPs
The death of PFI credits | 25

LEGAL*EASE*
Law and legislation, decoded
Legal and regulatory issues in PPPs | 41

BOOKSHELF | 42
Recommended reading

THE LAST WORD | 44
Parting thoughts on this issue

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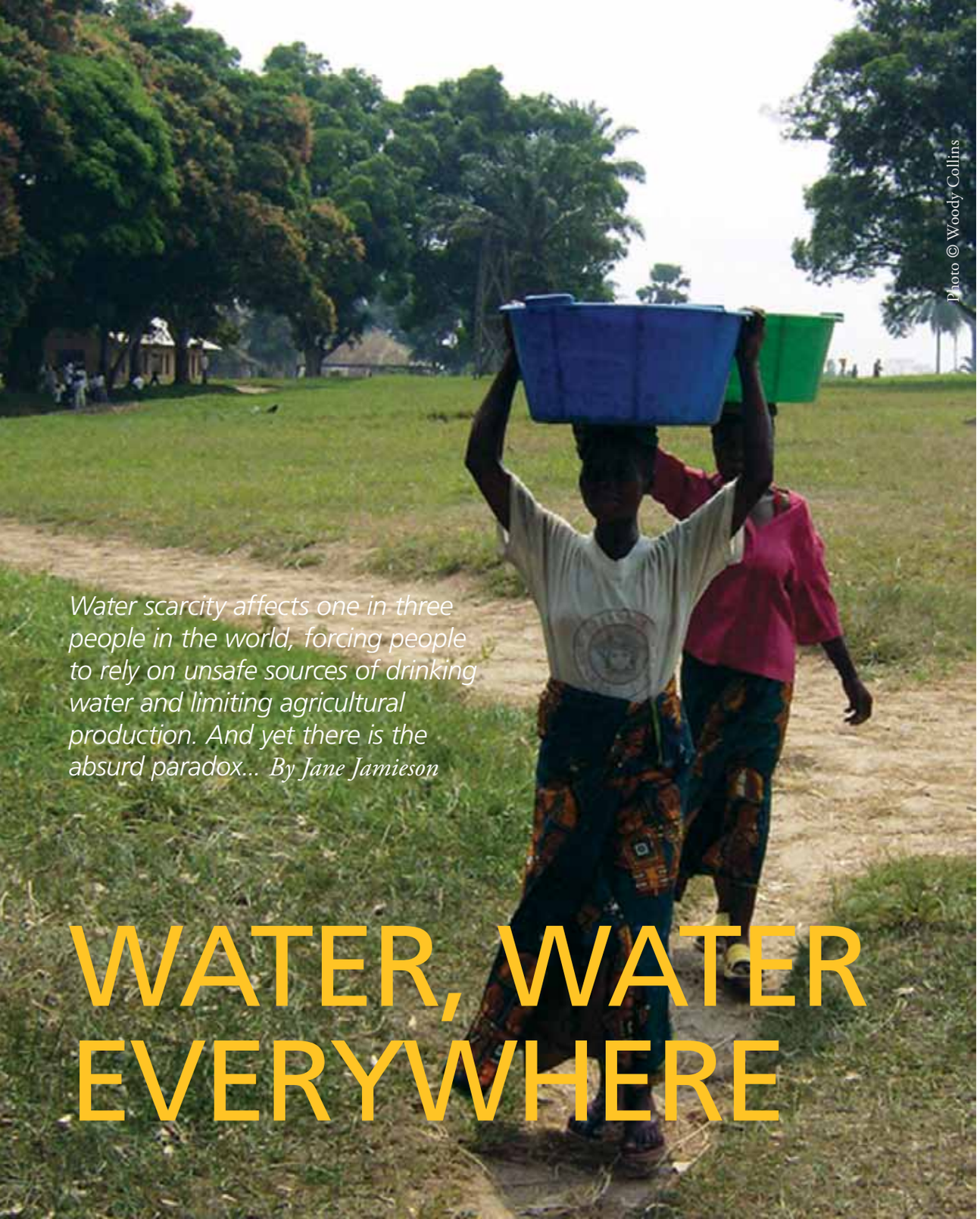


Photo © Woody Collins

Water scarcity affects one in three people in the world, forcing people to rely on unsafe sources of drinking water and limiting agricultural production. And yet there is the absurd paradox... By Jane Jamieson

WATER, WATER EVERYWHERE

Water, water everywhere/Nor any drop to drink," wrote Samuel Taylor Coleridge in "The Rime of the Ancient Mariner." In this 1798 poem, sailors blame the Mariner for the torment of their thirst. Today millions of people around the world face the prospect of "nor any drop to drink"—or to irrigate their land or feed their animals—and it's our lifestyle that is to blame.

The facts are stark: Water scarcity affects one in three people in the world, forcing people to rely on unsafe sources of drinking water and limiting agricultural production. And yet there is the absurd paradox that millions who lack access to water live in areas where there is plenty of rainfall or freshwater. In other cases, much of this precious commodity—for example, an estimated 50 percent of water used for agriculture—is wasted. Improving the way we conserve, manage, and deliver water is fundamental to solving the water crisis. The private sector has a critical leadership role in this.

Water & the private sector

The private sector has made significant and lasting contributions to the delivery of reliable, safe water worldwide. By 2007, private water operators were delivering services to around 160 million people in emerging markets. These PPPs have delivered water access to an estimated 24 million people since 1990*. Although price increases are often used as an argument against PPPs in the water sector, this is not necessarily borne out by the facts. In a sample of 1,200 water and energy utilities in 71 developing and transition countries, no systematic change in residential prices occurred as a result of PPPs**.

Both PPPs and the companies that operate them have evolved to meet the needs of people in the most affected areas. The nature of these partnerships varies widely and builds on the private sector's ability to improve quality and efficiency and to extend access—as well as the government's capacity to raise finance and subsidize expansion to the poor. In 2010, IFC supported the government of Uganda in successfully bidding out the expansion and management of water services for the town of Busembatia to the domestic private sector. The traditional transaction advice provided by IFC was complemented by a range of activities that addressed some of the key challenges faced by the domestic private sector, such as access to credit. This project will help the government facilitate the management of water PPP contracts by developing a generic management contract

* Marin, P., Public-Private Partnerships for Urban Water Utilities: A Review of Experience in Developing Countries (Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank, 2009).

** Gassner, K., Popov, A., and Pushak, N., Does Private Sector Participation Improve Performance in Electricity and Water Distribution? (Washington, D.C.: The International Bank for Reconstruction and Development/The World Bank, 2009).

FAST FACTS

the amount of water on Earth
326,000,000
TRILLION GALLONS

less than **1%** of the water on Earth is drinkable

the average American uses GALLONS of water per day **176**

the average African uses GALLONS of water per day **5**

70% of global water uses are devoted to agriculture

2,900 GALLONS are used to produce a pair of blue jeans

1,857 GALLONS are used to produce one pound of beef

55 GALLONS are used to produce one pound of oranges

water scarcity affects 1 in 3 people globally

46% of people on Earth don't have water piped to their homes

3,575,000
people die each year from water-related diseases

for use on privately-managed piped water systems that will ensure consistency in contract administration and management.

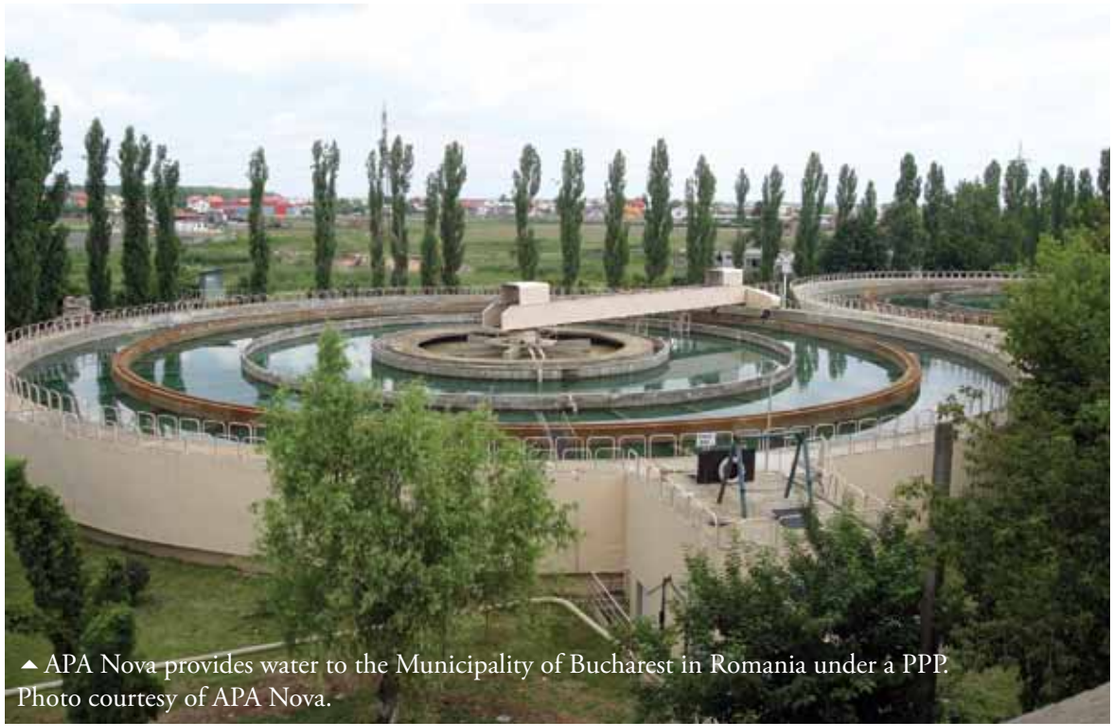
Part of the solution is also to strengthen the existing operator's ability to expand the availability of safe, clean water at affordable prices. In Kenya, 30 community water providers are accessing finance and improving services through an innovative partnership with K-Rep Bank. Today K-Rep Bank has disbursed over $1 million to community groups, benefitting nearly 40,000 people. This project brought together a partnership of development organizations committed to expanding services to the poor: WSP, PPIAF, and GPOBA. The project relied on each organization's ability to provide technical assistance and finance.

New approaches for agriculture

For the private sector to have a role in solving the water crisis, it must play a stronger role in agricultural water management. Here at IFC, we saw firsthand the success of this approach. Throughout the 1990s, citrus farming in the Guerdane district of Morocco was becoming increasingly unsustainable. The area's 600 citrus farmers were dependent on rapidly falling groundwater and facing increasing pumping costs as the water table fell by two to three meters per year.

To address this chronic overexploitation, in 2004 the government of Morocco, supported by IFC, implemented the world's first public-private partnership in the irrigation sector to attract private investment to construct a new irrigation network that would deliver water from an existing dam. We are also supporting the government of Brazil to develop a PPP to foster agricultural development in arid and underdeveloped areas of Pontal.

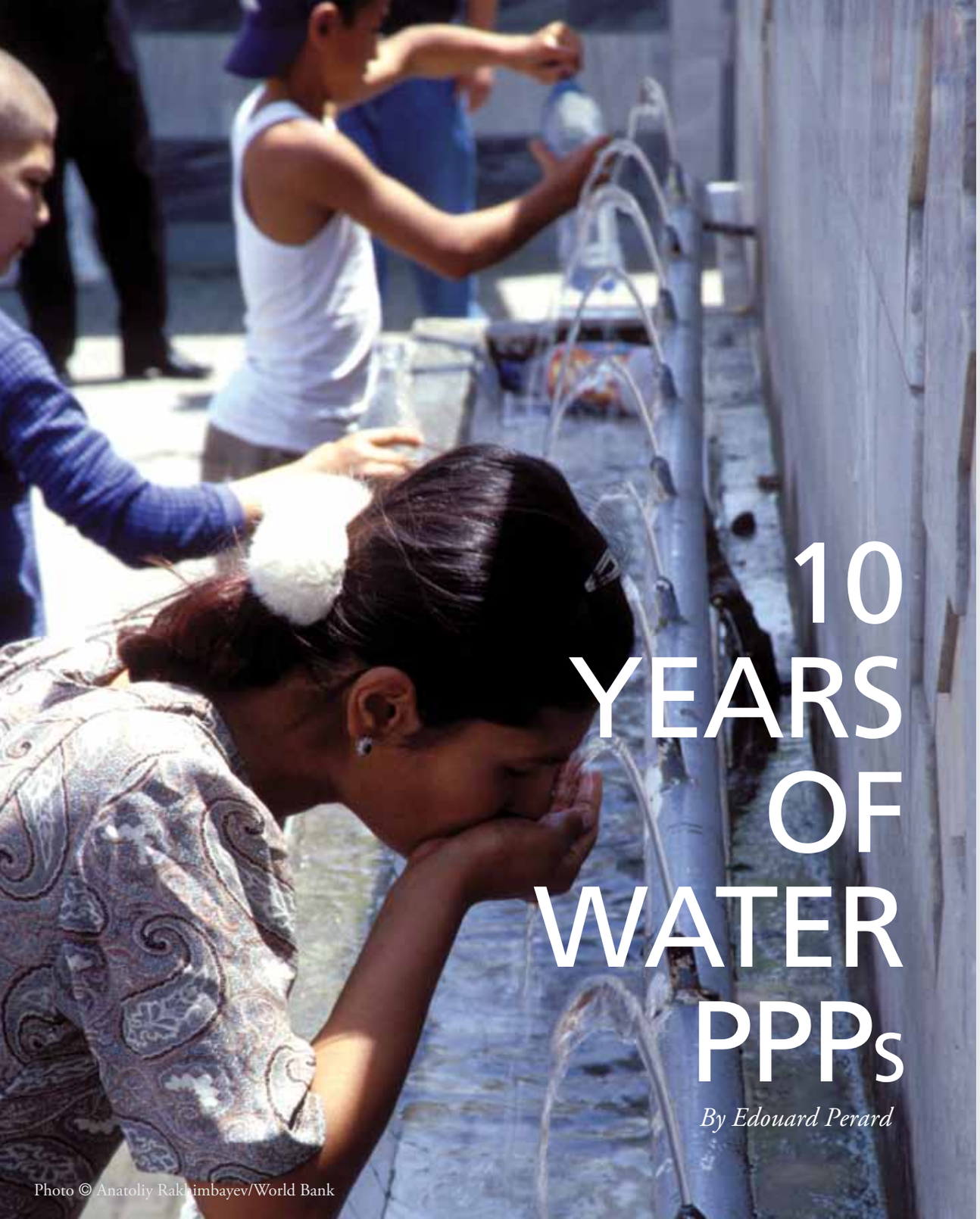
These non-traditional models of PPPs for domestic and agricultural water use are crucial to supporting the development of the water sector in many other developing countries. If well-designed, and implemented by strong and committed public and private partners, these partnerships can have a significant and lasting impact—so that "Nor any drop to drink" may one day echo only in the realm of poetry.



▲ APA Nova provides water to the Municipality of Bucharest in Romania under a PPP. Photo courtesy of APA Nova.

"The polarization of debate between public and private is unhelpful and lumps together two very diverse sets of actors and agencies on both sides. Each circumstance should be looked at individually and a suitable pro-poor, affordable,and sustainable solution found to fit each context. The decision-making process should be transparent and consultative, involving all relevant parties, to determine how these services will be provided and managed to commonly agreed standards."

WaterAid International Policy Statement on Private Sector Participation in Water



10 YEARS OF WATER PPPs

By Edouard Perard

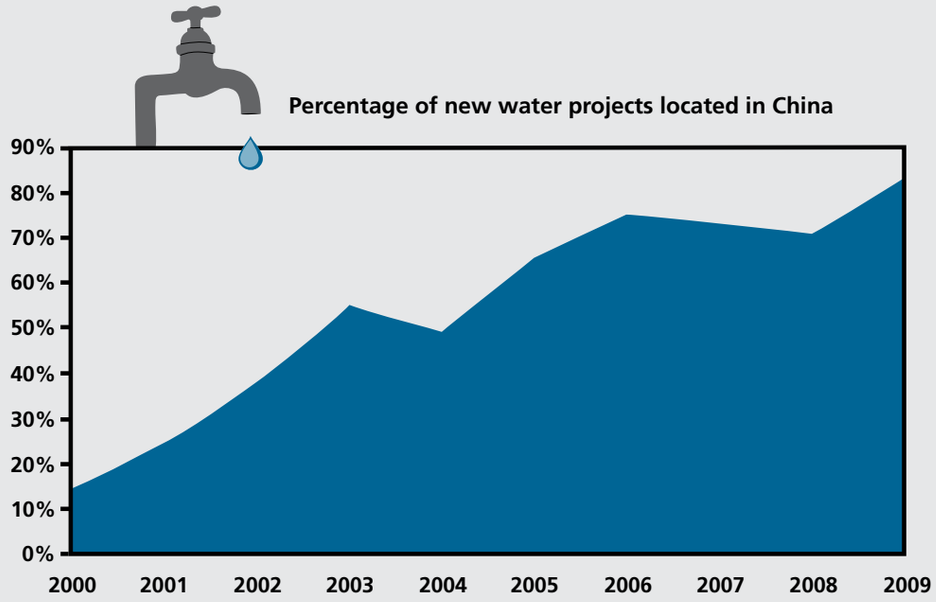
Photo © Anatoliy Rakhimbayev/World Bank

Private-sector participation in water by number of projects has expanded threefold during the last decade. With an average of 50 projects and $2 to $3 billion investment commitments per year, 535 water projects benefitting from private participation have reached financial closure during the last ten years. Commitments to water projects with private participation totaled about $34 billion in that same period of time.

The opening of China to private participation in water infrastructure and its emergence as the first water PPP market among low- and middle-income countries was certainly one of the most important changes of the decade. With 309 projects and $8.2 billion in investments over the last ten years, China alone accounted for 58 percent of all private water projects by number and 23 percent by investment. In 2009, the last year for which data is available, China accounted for 80 percent of private water projects by number in low and middle-income countries. Most of these projects were potable water and sewage treatment plants (278 since 2000), and were usually implemented under BOT agreements (about 200 of them). In addition, a certain number of water supply concessions were signed every year (22 in total since 2000). By comparison, other countries in the East Asia and Pacific region signed 22 projects with a total investment of $9.5 billion.

During the last decade, more than 55 percent of water PPPs were signed by private firms originating from low- and middle-income countries.

Latin America was the second most active region in terms of number of PPPs in water: 113 proj-



ects involving investments of $9.7 billion in 17 countries over the last decade. The PPP activity was concentrated in the first half of the decade with the second half counting three times fewer PPPs implemented than the first one. Most projects were located in Brazil, Colombia, Chile, and Mexico, which implemented 45, 29, 12, and 9 projects respectively. In this region, most projects were water supply concessions (79), followed by water and wastewater treatment plants BOTs (17).

Europe and Central Asia were also active in implementing new water PPP projects during the last decade: 14 countries signed 44 projects involving $3.1 billion in investment. Eighteen of them were located in the Russian Federation. Most of these projects were for water utilities (40) and were implemented through management and lease contracts (27), concession (nine) and divestiture (four).

PPP activity was relatively less important in the three remaining regions: Middle East and North Africa, Sub-Saharan Africa and South Asia. In the Middle East and North Africa, 16 projects involving $3.3 billion in investment reached financial closure; most of them were located in Algeria (13) and were BOTs for desalination treatment plants (nine). Sub-Saharan Africa had 15 projects involving investments of $180 million in 13 countries; the majority were water utility management contracts (nine). South Asia had 12 projects involving investments of $378 million; all of them were located in India. Eight were for water utilities and four for treatment plants.

The opening of China to private participation in water infrastructure and its emergence as the first water PPP market among low- and middle-income countries was one of the most important changes of the decade.

In addition to the shift in terms of geographical destination of water PPP projects toward China, the geographical origin of private water operators has evolved during the last decade. Some multinationals from high-income countries have progressively withdrawn from water PPP projects in low- and middle- income countries to refocus on high-income countries and on less risky engineering, procurement and construction contracts.

This resulted in notable changes. During the last decade, more than 55 percent of water PPPs were signed by private firms originating from low- and middle-income countries. This trend accelerated during the second half of the last decade, with more than 60 percent of new PPPs implemented by private operators solely from low-and middle-income countries. A high proportion of South-South water PPP projects (59 percent by number) were for treatment plants in China (174 projects). However, China was not the only destination for private operators from low- and middle-income countries. An important share of these South-South projects (23 percent by number) were for water utilities in Latin America (68 projects). Most of the South-South water PPP projects involved intra-regional or domestic private operators; inter-regional South-South water PPP projects remain rare.

These figures almost certainly understate the real scale of private sector service provision in general and the scale of South-South water PPPs in particular, since they consider only larger-scale private operations. Private operators also include small and medium-size distribution companies as well as informal operators that cover low-income urban areas. The size of operation and the fact that some operators belong to the informal economy make it difficult to document the situation. However, a World Bank report found 10,000 small-scale service providers in a limited sample of 49 countries (Kariuki and Schwartz, 2005) and an International Institute for Environment and Development study estimated that the global number may exceed one million (McGranahan and Owen, 2006).

Looking ahead, China is expected to remain proportionally an important destination for water PPP projects. Nevertheless, several external factors, like the long-term impact of the global financial crisis, or a policy change towards PPPs, remain difficult to evaluate. The market share of new entrants will depend partially on the strategy adopted by multinationals from high-income countries. In the meantime, small-scale private operators will continue to play a critical role in water delivery for poor people.

All calculations are based on data from the PPI Database (World Bank and PPIAF): ppi.worldbank.org.

Photo © Ianus

Water: Price it right, use it well

The *OECD Environmental Outlook to 2030* has identified water as one of the four critical environmental priorities for the coming two decades. Based on current trends, 47 percent of the world's population will live in areas of high water stress in 2030, and the United Nation's Millennium Development Goals on water and sanitation will not be met.

5 COMMON MISCONCEPTIONS ABOUT WATER

By Nico Saporiti

1.

Water is a public good…

In its natural state, water rains from the sky (at least in wet countries), flows from place to place supplying lakes and rivers, and gathers underground below private and public land. Water resources are indeed a public good. However, governments need to protect public water resources from over-exploitation (such as users living upstream leaving no water for those living downstream) and waste (users making an inefficient use of the scarce resource). They do this by tightly controlling the right to use water resources for commercial, public, and private purposes, through the issuance of a limited number of water abstraction rights. Any entity that is granted a "water abstraction right" has private property over the volume of water that it is allowed to collect from the public water resource. The water rights of users of water that do not provide a public service (such as bottling companies, farmers, or industries) are subordinated to those of the entities that provide a public service (such as the municipal water supply).

2.

...therefore it should be free

Drinking water is scarce and essential to life. Therefore the argument is often heard that it should be available at no cost. Food is also equally scarce and essential to life, but one rarely hears the argument that it should be free. In fact, if farms were owned by the state, one could expect inefficient production, waste, and food shortages (or high prices). Whenever a public good is scarce, making it free takes away any incentive to eliminate waste and to increase supply. Prices signal the utility, value, and scarcity of all goods, and make possible their efficient allocation.

To eliminate waste of water resources, the price of water rights should be established through the interaction of supply and demand. To ensure that municipal water supply systems are financially and technically sustainable, the average price for drinking water supplies should cover the full cost of clean water abstraction, treatment, and transport. Governments can easily set up cross-subsidy systems to ensure that even the lowest income groups can afford an acceptable level of consumption.

3.

The best system is public… no, private… no, a PPP!

Municipal water systems are natural monopolies because constructing multiple networks of underground pipes to compete with each other is not economically feasible. Unfortunately monopolies are rarely efficient, effective, or responsive to customers. In the absence of competition, monopolies can charge higher prices in pursuit of greater profits and be unresponsive to the end-users. Public-private partnerships in the water sector should logically be vulnerable to the disadvantages of monopolies.

The only alternative to competition is regulation: to enforce through contracts the users' rights to water services of a certain quality level, at a competitive price. The ideal structure should not present conflicts of interest: the water service provision function should be unconnected to the (public) regulatory function, and from the (public) function of setting the levels of service. In practice however, this often makes the communication among the private service provider, its public regulator, and government very difficult. The relationship is conflicted, making for an ineffective system. Hence, one of the critical advantages of a public-private partnership. By virtue of their economic and operational bond, the public and private sector reach a common understanding of the technical, economic, and social challenges involved in providing sustainable water services.

4.

PPPs invariably result in higher tariffs

Public water service providers are liable to political considerations, which in almost all cases favor the minimization of water tariffs to the large mass of the existing users. If public funding is not available for new investments (for example, to expand service to the poor, who are not connected to the network) or to maintain the service, the infrastructure and service quality deteriorates. Public-private partnerships are often introduced as a last-minute measure to remedy unsustainable economic and technical situations. For example, private investors are requested to inject fresh capital for new investments under tightly controlled contractual or regulatory tariff frameworks.

The evolution of tariffs resulting from the introduction of the PPP depends in large part on the technical and economic situation at the point when the PPP takes over the water service infrastructure, and on the level of public financial support. The efficiencies produced by the private investors can bridge the gap to cover operating costs and help finance new investments, resulting in stable and sometimes decreasing tariffs. There is a growing body of evidence suggesting that private participation in the water sector does improve efficiency and increase coverage. While price increases are often held up as an argument against PPPs in the water sector, this is not necessarily borne out by evidence. Research by the Public Private Infrastructure Advisory Facility (PPIAF) found that in a sample of 1,200 water and energy utilities in 71 developing and transition countries, there was no systematic change in residential prices as a result of PPPs.

5.

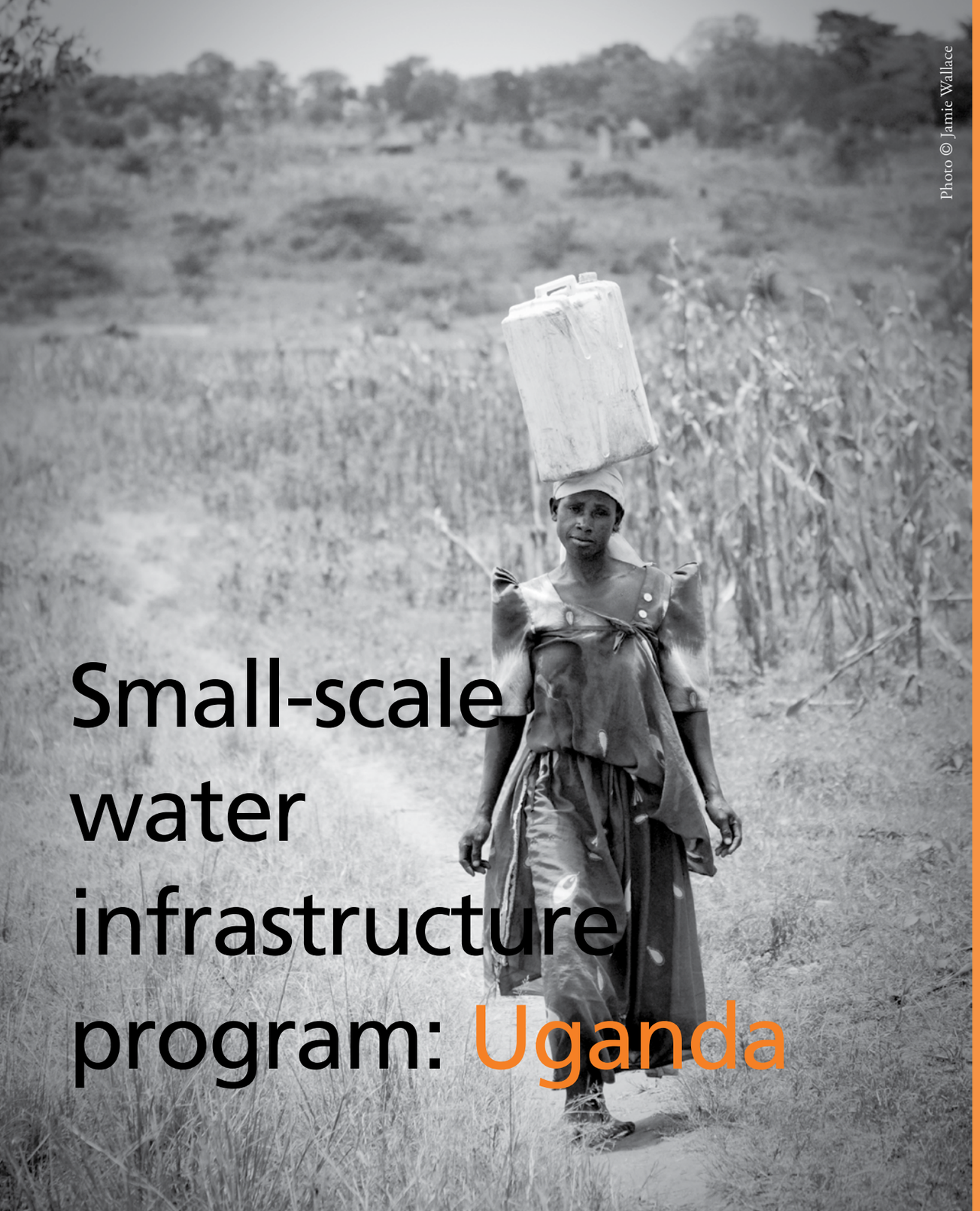
A water sector PPP is the privatization of water

A PPP is not a privatization. Privatizations typically involve the sale of publicly-owned assets or goods to private investors. This has occurred in the water sector only in a few cases, notably (and with a degree of success) in the U.K. and in Chile. In the water sector, however, when a PPP is implemented, the water resources invariably remain a public good that is never alienated. Public authorities seek to conserve and protect through regulation contract supervision.

Photo © IFC

FEATURE

SMALL-SCALE WATER



Small-scale water infrastructure program: Uganda

In small towns and rural areas of Uganda, where 90 percent of the population lives, water shortages are part of daily life. In these areas, 60 percent of the population lacks access to safe water, and waterborne diseases and infant mortality are widespread. Improved access and use of safe water and sanitation facilities are among the country's key priorities. To achieve this goal, the government decided to decentralize rural water supply delivery.

To help Uganda achieve greater efficiency and improve access to water through public-private partnerships, IFC signed a mandate to implement the Uganda Small-Scale Infrastructure Provider (SSIP) Water Program in 2007. A set of pilot transactions was implemented to modify the flawed contractual arrangements in use, improve the capacity of the key stakeholders, and model strategies to access financing.

Seeking support

Uganda's government had implemented PPPs in peri-urban and rural areas since 2001 and established management contracts with private operators in more than 70 small towns. However, these contractual arrangements were generally weak and plagued with capacity challenges, both at the national and regional level. Three program components were in need of support: transaction advice, public sector capacity, and access to finance. IFC

also addressed financing constraints and developed a training program based on the proposed generic management contract to address weaknesses in the area of contract administration among public sector stockholders. Elements of sustainability were built in throughout key activities of the program to ensure continuity. But first it was important to conduct due diligence in ten small towns, uncovering contracts of short duration and varying performance indicators. At that point, a generic contract was proposed with a minimum term of five years, appealing to both private operators and lenders.

The geography of the areas in need was a significant area of research. Clustering towns within close proximity to one another allowed for larger contracts that capture economies of scale, specifically on human resources and capital investments. However, since funding was secured for only one of the ten towns, this approach was abandoned. A bidding process was ultimately implemented solely for the town of Busembatia.

In the past, private operators in Uganda raised financing by using overdraft facilities provided by the banks or secured loans using other existing business, so improving access to financing was a priority. IFC identified alternative models with greater potential for success, including leveraging its relationship with local banks, which presented financial institutions for the first time with a viable business model for small town water operators.

The road ahead

Ultimately, Busembatia's five-year management contract was awarded to Trandint Limited, which satisfied the technical requirement, secured a financing arrangement with lenders, and offered the lowest total bid price of $270,000—below the available subsidy of $300,000 allocated by The Global Partnership on Output-Based Aid (GPOBA). The new operator agreed to install 400 new connections during the first two years and avoid increasing tariffs for the duration of the five-year management contract.

Throughout the process, the advisory work was supported by the Austrian Development Agency. GPOBA provided funding for capital investment costs to support the private operator. Among the expected results of this arrangement:

- Residents of Busembatia will enjoy expanded access to water at the same tariffs until 2015.
- Four hundred new water connections will be installed.
- DFCU Bank, a Ugandan commercial bank, loaned approximately $100,000 to the winning bidder for the Busembatia contract.
- Seventy representatives from local authorities participated in two IFC-designed training programs for public sector stakeholders.
- USAID is using IFC's relationship with local banks as a model for developing a risk-sharing product for banks to lend to private operators.

GPOBA

The Global Partnership on Output-Based Aid (GPOBA) is a partnership of donors and international organizations working together to support output-based aid (OBA) approaches.

OBA is an innovative approach to increasing access to basic services—such as infrastructure, healthcare, and education—for the poor in developing countries. It is used in cases where poor people are being excluded from basic services because they cannot afford to pay the full cost of user fees, such as connection fees. This supports PPP projects because OBA helps ensure the viability of a PPP by absorbing the cost of access to a particular public service for the target population.

GPOBA recently launched *OBA Data*, the first online database of OBA projects around the world. This puts access to comprehensive and in-depth data on the universe of OBA projects at the fingertips of development practitioners. The interactive tool offers advanced search features for easy access to OBA project profiles worldwide; interactive maps for easy identification of OBA projects; and custom reports, charts, and tables on project design features and performance. Download the eBook, *OBA Data: A Brief Introduction* (gpoba.org) to learn more.

Photo © GPOBA

Maji Ni Maisha: Innovative finance for community water schemes in Kenya

An innovative GPOBA project is increasing access to clean and reliable water for rural communities in Kenya, using a blend of commercial finance and an output-based subsidy. The project is helping small community-based water providers access the finance they need to improve existing water systems and connect poor households to a piped water supply.

This project shows that investing in community water projects can be viable for commercial banks. Following a successful initial pilot, the program is being expanded nationally and will target over 165,000 beneficiaries in 55 communities. ♦

Private small water supply systems

By Ella Lazarte

Emerging lessons on sustainability show that delegated management of small piped water supply systems—mostly in the form of PPPs—is steadily taking root. There are encouraging results, such as increases in coverage and revenues in Mozambique and Uganda, which have led to the model's rapid growth. Twenty-five percent of small piped schemes in 10 of the 17 participating countries in the Water and Sanitation Program's recent workshops held in Maputo, Mozambique, are already under delegated management. In some countries, such as Niger and Benin, numbers reach 50 percent. Our top five lessons learned included:

- **A professional water service makes a happy customer.** Experience of private-sector providers demonstrated the benefits of a more professional management to improve water service quality, such as an increase of over 300 percent in-house connections in the small piped systems under PPP management in Mozambique.
- **A sustainable PPP is more than a signed contract.** We need to strike a finer balance between specificity and simplicity in contracts and adequate diagnostics of technical functionality and assessment of business profitability. Furthermore, there is a need for business plans to help further establish financial viability of water systems.
- **No financing, no PPP.** Rehabilitation and extension investment needs remain unfunded in many cases. Blending public and private sources of financing (such as grants and commercial loans) to water operators presents an opportunity to tackle this issue. A good example is the Kenya microfinance/OBA project.
- **Lack of regulation puts PPPs at risk.** Regulation remains the weakest link in the delegated management environment. Challenges are also significant in the areas of funding and data collection.
- **Business development services contribute to sustainable service delivery,** with providers offering benefits to both contracting authorities and operators. The experience in Mali of STEFI operators providing technical and financial audit services on a cost recovery basis illustrates this promise. ♦

Private-private partnerships

Photo © Acumen Fund

WaterHealth International (WHI), based in India, offers customers safe, affordable drinking water by developing and marketing community-owned, decentralized water purification and disinfection systems and services to underserved villages. It has helped reduce the spread of waterborne diseases and has sparked a new sector for delivering clean water in India.

WHI's technology for purifying bacterial contamination in collected surface water was developed after a waterborne cholera epidemic in 1993 killed 10,000 people—in just one month. Each WHI system has the capacity to serve 2,500 to 5,000 people a day. Water is sold for less than $.01 per liter.

An initial investment from the Acumen Fund in 2004 helped the company launch its first community water system in India. Because of WHI's significant impact on rural health, IFC has made three separate investments in WHI since 2009, totaling over $20 million. Now, WHI has more than 300 water systems. About 250,000 people purchase safe water regularly. ♦

Source:
IFC and Acumen
project materials

The death of PFI credits

by Jeff Delmon

I know, I know: this inaugural column should follow the theme of the edition—water. I should write about water finance. Maybe looking at results-based internal transfers. Or how to use government budget, donor grants and IFI funding to encourage development goals which fit so well with PPPs, like the recent work in Indonesia and Honduras, and using those future transfers to secure debt. Then again, I could talk about using secure revenue streams from water to access cheaper and longer debt, like the water revenue securitizations (if I can still use this word in polite company) that used to be so popular in the U.K. These of course foreshadowed the new French practice of securing bond issuances with Dailly assignments of government payment obligations. But let's come back to these topics in future editions. Today, I want to talk about the death of PFI credits.

As we know, PPPs can be a very attractive option for those concerned with the efficient management of the government balance sheet, for long-term supply of national infrastructure. But line ministries and local governments may be less convinced by PPPs. After all, PPPs cut into budget allocations, and the efficiencies available through PPPs often do not translate into larger budget allocations for the line ministry or local government. So ministries of finance institute PFI (private finance initiative) credits or similar mechanisms. Exhibit A: India's viability gap fund (VGF), which (maybe due to its evocative name) has successfully inspired VGFs in a number of other countries.

These extra-budgetary sweeteners encourage line ministries and local governments to adopt the procurement method with the most benefits for the nation, where the government's planning and budget process does not create enough of an incentive. The U.K., however, has put the PFI credit out to pasture. Maybe local governments and their ministries have been evangelized, no longer needing encouragement to use PPPs when merited. Maybe the new Infrastructure U.K. is meant to create political incentives to make procurement decisions based on value for money (VfM). I hope they are right. But it would be a shame if the U.K. lost some of its infrastructure dynamism for the small price of PFI credits. Babies and bathwater – do we have to throw out one with the other? See, we're back to talking about water again. And in both cases, sometimes we need to be reminded of what we already know. ♦

The industry behind the tap

Nelson Beete has been the chairman of FIPAG (Fundo de Investimento e Patrimonio do Abastecimento de Agua) since its founding in 1998. FIPAG is the public asset holding company for water infrastructure for the major cities of Mozambique. In 1999 FIPAG entered into a PPP arrangement with Aguas de Mozambique (AdeM), a consortium of water operators and Mozambican investors. This included a lease for the capital city, Maputo, and a management contract for the four cities of Beira, Quelimane, Nampula, and Pemba. Renegotiations followed the departure of international partner SAUR, and in 2010 FIPAG purchased the shares in AdeM of the remaining international partner Agua de Portugal (AdeP). IFC has been advising FIPAG on options for private sector participation across the urban water sector in Mozambique.

How did you get your start working in the water sector?

I have an engineering background and am a civil engineer by training. Even before I went to university I was already working in the water sector. I grew up in the water sector, first as a draftsman in public works, and then as a medium-level technician, building a dam in paddy fields for rice. I went to work for a utility in 1983.

In 1995 I did a Master's degree in engineering and when I returned here, this project, called the National Water Development Project, was starting. I was appointed the project leader. This was the project that determined the reforms in water and created the government agencies. We had all that in place and had to sign the credit agreement with the World Bank to implement the reforms. Our organization only existed on paper at that time. There were no board members. I was the first employee and my first task was structuring the credit agreement with the World Bank. I've been here from the very beginning. Now at the head office, we have grown to 77 employees.

What's your experience been implementing a PPP? What's worked well?

In developing countries, there is a school of thought that involving the private sector in such a basic service like water is controversial. But water can be a business. Water can be managed professionally. There is an industry behind the tap that you have at home. What is important is the arrangement. It should be made in such a manner that the service will be efficient and that the water will reach as many people as possible. That should be the goal of any PPP.

"Water can be managed professionally... What is important is the arrangement. It should be made in such a manner that the service will be efficient and that the water will reach as many people as possible."

Looking back to our first transaction, we expected that the private sector would come in and solve anything. Our expectation was that we do nothing and the private sector does everything. But then we had to renegotiate the contract and the second contract was quite restrictive. With the second contract, we tried to resolve the problems we had at hand at that moment. It is difficult in a 15-year contract to foresee what will happen in year 10. My view is that those contracts need to be written in a manner that's flexible, that you can adjust as time goes by. When you have a system that is quite deteriorated, your first objective is to keep it running. That's where the focus is. But once it's running, what's next? Our contract was not written properly, to allow for change as time went by.

I also learned that a service contract is easier to maintain than a lease contract. Lease contracts, which we had in the beginning, are very difficult to manage because of division of responsibility with respect to maintenance and repair. It's very difficult to define where the maintenance starts and ends and where repair starts and ends. I believe that a service contract is much easier because there is no such grey area.

"We had to manage expectations: Keep the politicians informed, keep the public informed. Even when there are problems, we had to say immediately how we are going to solve it."

You terminated your lease early and bought the shares back. This termination process can be very acrimonious but in your case it's been good all around. How were you able to achieve that?

I must confess that it went very well. Subjective issues and emotions were put aside during the discussion and ultimate termination. We just looked at the facts. We were not discussing perceptions. Plus, AdeP wanted to sell, we wanted to buy. In fact, because of the positive tone of the discussions between ourselves and AdeP, now we are even friends, more friends than we were before, just because of how the whole thing went. We are still corresponding because there are things to deal with, like providing additional documents, and it's just so smooth. It's unbelievable. I pick up the phone and they try to resolve the issue. It's amazing, when compared to any other negotiation. So this makes me very happy.

PPPs in water can be quite controversial, as you said, but in Mozambique it hasn't been as controversial. How have you managed the relationship with all your stakeholders?

First, there was political will for this to take place. So even when we were facing problems, the government was always behind it. That was very important. Second, we spent a lot of money

leading public consultations, where we explained to different stakeholders what we were doing from the very beginning. We did this particularly with local authorities and the workers, and had lots of open discussions where people voiced concerns. For instance, the workers were afraid of losing their jobs. The local authorities were concerned about the tariffs and whether or not it would get out of control. Others would say, "Why bring in someone who wants to make a profit? It's such a basic service." So we listed all those concerns and answered them. We explained that the tariff would be set by an independent regulator, for example. We explained that sometimes the profit the private sector makes is lower than having a system badly managed. So we tried to address all the concerns.

We had to manage expectations: Keep the politicians informed, keep the public informed. Even when there are problems, we had to say immediately how we are going to solve it. Local authorities need to know that although we are bringing in the private sector, we will not get results overnight. Looking back, it was a good thing to spend resources and time managing expectations, trying to keep the key stakeholders informed about everything that was taking place.

"You have to define roles no matter what; people need to be held accountable and be rewarded when they perform."

You brought private-sector approaches into your own organization, and the quality is quite high. It's clearly a successful approach.

From an HR perspective, you have to define roles no matter what; people need to be held accountable and be rewarded when they perform. Our operation started because the government wanted to increase water coverage from 40 to 60 percent. We had a retreat with all the directors and they were showing an increase of one to two percent per annum, and we had to increase the coverage by 20 percent in five years. At one or two percent per annum, we would never get there. So we thought about how to go about this. One thing we found was that we had too many performance indicators, like 30. That's too many. The managers were confused. So then we tried to find the key indicators to track the business and got down to seven.

For those meeting their targets, we started to provide incentives. This is how our [private sector] approach got started. Before that time, we used to have lots of complaints about our commercial software; the problems were not fixed in time. Once we set the targets and provided the incentives, all of a sudden there were no more problems with the software. Because employees had a clear target and incentives, they managed to have a direct relationship with the supplier, they fixed the problem, and were no longer throwing problems back to us.

Most here have a fixed and a variable part of their salary. Now we don't have to argue with people about whether or not they have to work. From time to time we just do performance assessments and if you did very well, you get 100 percent of your salary; if not, you get part of it. So our employees are very focused on meeting targets, and we provide assistance for them to do this. They never throw problems back to us. Those not performing, we simply replace them.

If you were the consultant on someone else's project, how would you advise them on a PPP transaction?

If I were a consultant going to a country, rather than introducing the PPP model up front, I'd try to work it backwards and ask what we need to do to deliver the service in the most efficient manner. We would definitely end up with some sort of PPP, either through technical assistance or a service contract. You have to concentrate on your core business. You have to find partners. You will end up with some sort of PPP, also combined with some public-public partnership, but keep the solution open from the start. I'd also stress that PPPs are not a panacea for everything. Once we get the principles right, we could find the label. This is how I would conduct a discussion if I were a consultant.

What do you see next for Maputo?

We have to put the consumers first. We have to ask what is the arrangement that would enable us to get the service in an efficient manner and that meets our consumers' expectations. That's how we should look at it. That's how the private sector does business, especially in a competitive market. Water is a very localized business, so you have to have the right local experts, and make sure that business is carried out in a manner that fits well within our environment and our society. After 10 years, we now have the experience, know-how, and qualified staff. But you cannot do it without top international resources. It is impossible. How you combine all those things is the challenge.

With these elements in place we can meet our primary goals of managing expectations, keeping people informed, and delivering resources.

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FEATURE

IRRIGATION

Photo © Anna Lúcia Horta/IFC

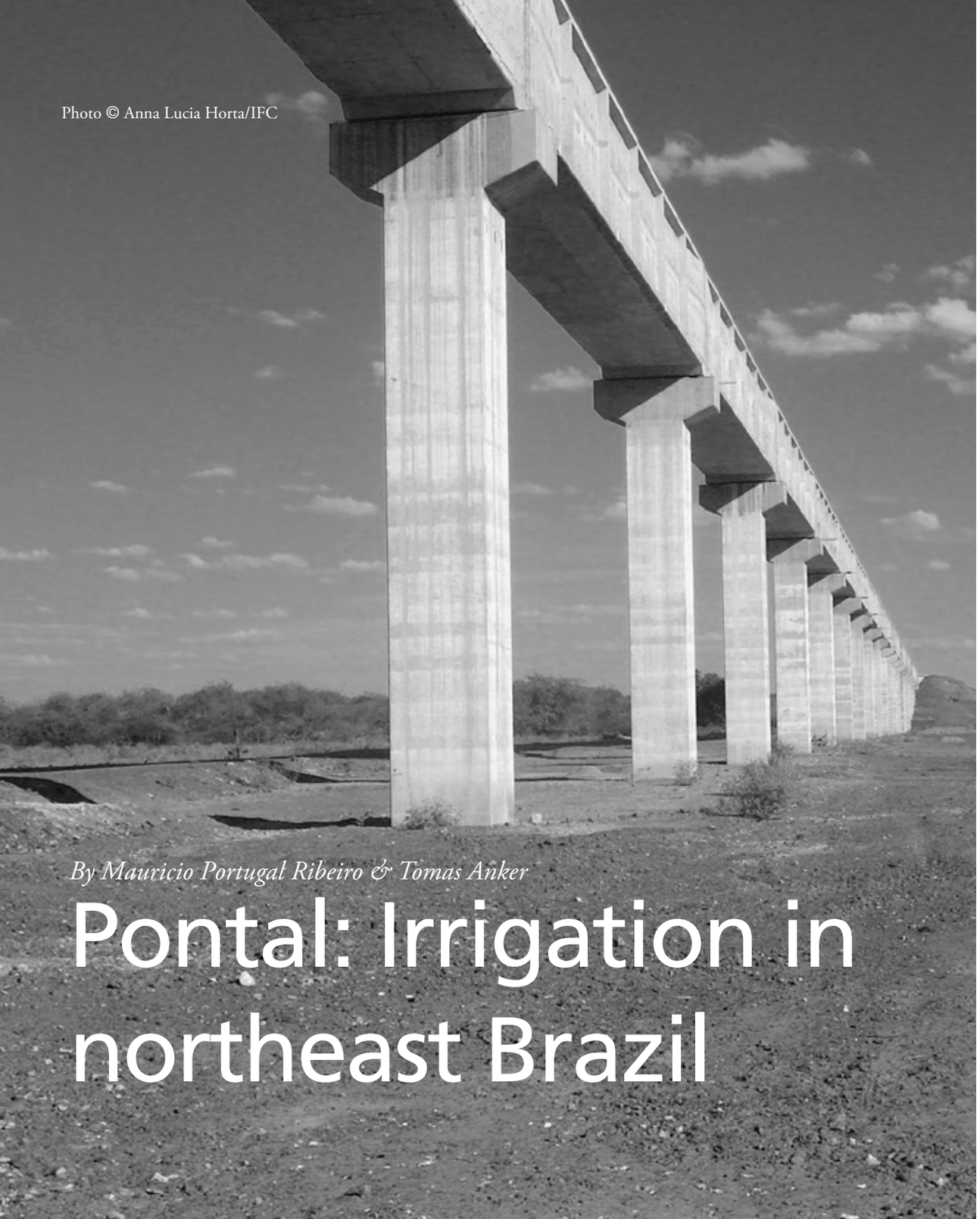

Photo © Anna Lucia Horta/IFC

By Mauricio Portugal Ribeiro & Tomas Anker

Pontal: Irrigation in northeast Brazil

Brazil is famous around the world for its lush Amazon rain forest, but the country is also home to the dry, desert region of the northeast. Because of the climate, the area was sparsely populated and economically underdeveloped until the mid-20th century, when a public irrigation program began. This involved the construction and operation of the irrigation infrastructure by the public sector, which was also responsible for the settlement of farmers through the distribution of irrigated lands. This public irrigation program followed three stages. Between 1960 and 1970, projects were intended for the local population. From the 1980s to the mid-1990s, irrigation projects incorporated participation of small agribusinesses in predefined percentages. Beginning in the mid-1990s, the objective was to reach financial emancipation of these perimeters and transfer irrigation to the private sector.

Pontal is a new initiative in which private infrastructure development companies can engage in a long-term concession to build and operate an irrigation infrastructure in Brazil's fast-growing agribusiness sector. Pontal is a unique opportunity for agribusiness investors to position themselves in a region with advantageous conditions for fruit production—especially due to the country's climate, water availability, and established logistical channels for export.

A sector in search of self-improvement

Pontal represents an evolution in the way Brazil's government handles its irrigation business. Many believe the country's current model is inefficient for two main reasons: (1) the occupation rate of the land in public irrigation projects is much lower than expected (generally less than 50 percent), undermining the potential development effects of these projects; and (2) political pressure. The water tariffs are initially set at a subsidized level to attract farmers to the projects, and they are supposed to grow over time to reach an adequate level that covers at least operation and maintenance costs. Unfortunately, most of the farmers attracted to these projects lack the ability to pay water tariffs, and for this reason delinquency rates are high. With high delinquency rates, irrigation projects need governmental financial support (i.e., subsidies) to cover operating expenses, and usually lack resources to cover maintenance expenses. Maintenance and construction work is frequently delayed, construction costs are high compared to private sector efforts, and the water supply is unreliable, since funds are not always available when maintenance is needed.

Despite all these issues, the promise of irrigation projects continues to attract investment. A World

Photo © Anna Lucia Horta/IFC

Bank study on the social and economic development impact of irrigation projects in Brazil's semi-arid region clearly shows that irrigation projects, if developed under sustainable and entrepreneurial standards, can promote development. Positive impacts include the reduction of regional immigration, job creation, generation of income, and increase in GDP and urban development. Overall, Brazil's government understands that project management and implementation by private partners combines efficiency gains inherent to the private sector and assures social and economic development.

The promise of Pontal

According to the existing technical studies, some of the crops likely to succeed in Pontal include banana, melon, papaya, pineapple, grape and mango; other crops, such as tomatoes, dendê, orange, and sugar cane could be adapted to the region with some restrictions related to scale. A separate study vouches for the feasibility of citrus production in the region, and counts on areas outside Pontal to achieve the scale required that would justify the expense of a crushing plant in the region. Regardless of the crop chosen, the agricultural risk will be assumed completely by the agribusiness company selected to be the concessionaire, and risk will not be shared with the government.

The Pontal region has an established logistics infrastructure for exports, including three port alternatives and highways in adequate condition. In addition, Petrolina's airport, approximately 40 kilometers from Pontal, already handles cargo planes shipping fruit to other continents.

The project involves two activities:

- The operation and maintenance of the common irrigation infrastructure, in line with rational use of water resources.
- The occupation and development of irrigable land, in line with rational use of soil resources.

The concessionaire will also have the right to expand the provision of irrigation services.

With demonstrated soil fertility and the logistics in place, Pontal's goal was to attract a private investor (or a consortia of private investors) with proven financial capacity. Prequalified investors were required to have minimum net worth of $54 million, which was deemed sufficient to guarantee the ability to capitalize the Pontal Special Purpose Company (SPC) with a minimum equity capital of $18 million.

While the government had already invested approximately $140 million in the development of the project infrastructure, an additional $54 million investment was required to complete the construction of the common infrastructure of the whole area. The government was prepared to pay a maximum of $150 million in periodic payments over the 25-year period of the contract.

The concession contract grants the Pontal SPC absolute freedom in the selection of crops. However, it requires the agribusiness company to initiate the agricultural development of the overall Pontal area. In fact, the government intends to allocate at least 25 percent of the irrigable land to small farmers, and the agribusiness company will be responsible for promoting a professional and entrepreneurial occupation of these lands by the selected small farmers.

The winning bidder

The bid for Pontal was held in September 2010 in a public session held at Bovespa (São Paulo Stock Exchange). Tetto SPE, a Brazilian company, was the winning bidder, requesting the integration of 51 percent of the total irrigable land and a total government payment of $119 million.

The agriculture company that will take part in Pontal's efforts will be committed to exploring several sources of income: organic powder milk for export; bovine and cattle genetic material for milk production; pisciculture; and coconut. The company will provide all the necessary technical assistance and input, as well as the 50 initial milk-producing cows, to the selected small farmers. It will also guarantee the purchase of their production. As financial emancipation of the irrigation sector approaches, so does a better livelihood for farmers.

INFRACO & PIDG

In 2008, a successful pilot irrigation PPP brought together small farmers and commercial farmers in Chanyanya, Zambia. Building on that foundation, InfraCo Africa is scaling up to cover much of the Kafue district. The projects provide farmers with access to year-round irrigation with centralized management to create a sustainable commercial farming operation.

InfraCo Africa aims to stimulate greater private investment in African infrastructure development by acting as a principal project developer, focusing on lower income countries and funding early stage, high risk initiatives. It takes an equity stake in the project and makes decisions that will lead to a socially responsible and successful construction and operation. InfraCo Africa is funded by PIDG (Private Infrastructure Development Group). PIDG is a coalition of donors mobilizing private sector investment to assist developing countries to provide infrastructure vital to boost economic development and combat poverty.

PPPs in irrigation

eLearning

By Clive Harris

The irrigation sector plays a crucial role in food production, but there have been ongoing difficulties raising financing and sustaining the productivity of investments. In particular, maintenance has been a serious problem: cost recovery in the sector has been too low even to recover operation and maintenance fees. Traditional irrigation plans have been founded on massive public programs, many of which have been abandoned after a prolonged period of neglect.

There is a growing interest in using PPPs to provide more efficient and sustainable irrigation infrastructure and services. To assist practitioners in understanding some of the key issues on irrigation PPPs, WBI launched *"Public-Private Partnerships in Irrigation Management,"* an e-learning course, in July 2010. This short course is a part of the WBI core learning program, *"Climate Change Adaptation for Managing Agricultural Water."* It aims to improve our understanding of how some fundamental water management challenges can be addressed through private sector participation, a relatively new concept in agricultural water management in most countries. The development goal is to foster sustainable agriculture water services to farmers, an even more crucial goal in light of changing climate conditions.

The three 30-minute e-modules help break through the jargon and myths around PPPs, especially irrigation water management. The goal is to understand the core features, the differences between various PPP models, and how a well-designed PPP can help overcome common problems with government-provided irrigation services. The e-learning draws on case studies and walks learners through the stages of developing a PPP transaction, from engaging with stakeholders to designing regulatory and monitoring arrangements. The e-learning course is available on WBI's website (wbi.worldbank.org) under Learning ▸ Learning Products ▸ Climate Change Adaptation for Managing Agricultural Water.

WBI also held an e-conference on PPPs in irrigation on the Global PPP Network (pppnetwork.info). To view this, go to the Network, join if you are not a member, and view under Exchange ▸ E-conferences.

To learn more about WBI's work on PPP capacity building go to wbi.worldbank.org and look for public-private partnerships under WBI Topics.

Private-private partnerships

Photo © Matt Jacoby

Ever visit a farm without access to irrigation? When a *New York Times* reporter recently traveled to a rural region in western India, he saw what happens to land lacking this basic technology: its families live from crop cycle to crop cycle. There is no way to depend on a steady livelihood—or the next meal. This is how the vast majority of India's farmers live.

Jain Irrigation Systems Ltd., a pioneer in the field of micro-irrigation systems, is changing that. Jain's drip irrigation technology uses a series of perforated tubes that deliver water directly to crops, reducing losses to evaporation and weeds. According to Anil Jain, managing director of Jain Irrigation, the company recognized that when working with small farmers it would need to do more than just sell technology. "They've been used to thinking: 'more fertilizer, more output' or 'more water, more output,'" Jain said of the farmers. Pitching the drip irrigation over the traditional flood irrigation required convincing farmers of the value of the up-front investment.

Their hard work paid off. Jain's drip irrigation has allowed 25,000 small farmers in India to increase annual individual farm income by up to $1,000 per year, and has led to savings in water usage equal to the annual water consumption of more than 10 million households. As the *New York Times* commented, "It almost sounds too good to be true: a technology that cheaply improves crop yields, reduces water use and allows the monsoon to replenish groundwater aquifers. Let's hope it isn't."

Jain Irrigation was the recipient of the 2010 IFC Client Leadership Award for its inclusive approach to sustainable agriculture.

Sources:
IFC and ClimateWire

Legal & regulatory issues in PPPs

By Victoria Delmon

The PPPI Resource Center (worldbank.org/ppp) has been developed by the World Bank to provide guidance and materials on the legal, contractual, and regulatory issues around PPPs. It includes checklists and risk matrices as well as sample laws and regulations, terms of reference for consultants, and sample agreements and contracts.

Are you researching models of water PPP network contracts in Africa? We can help. The World Bank has developed and applied successfully in Francophone Africa over the past few years a hybrid concession-affermage contract for water networks. You can find an explanation of the hybrid structure in English and French, together with the text of the agreements, summaries, and annotations in French, on the PPPI Resource Center web site. If performance-based contracts are your primary focus, you can also find summaries and annotations of sample performance-based contracts and operation and maintenance contracts for water networks.

In several Latin American countries, as well as Spain, joint ventures have gained popularity in the water sector. The PPPI Resource Center has extensive archives on these ventures. You can access explanatory notes as well as links to the legal frameworks behind them. Countries covered include Argentina, Brazil, Colombia, Costa Rica, El Salvador, and Spain.

Project-financed BOT initiatives, as well as design, build, and operate contracts, can open up additional sources of funding for new water and wastewater treatment plants. Sample agreements in this arena can be found on the PPPI Resource Center.

The PPP in Infrastructure Resource Center for Contracts, Laws and Regulation (PPIRC)—formerly the Infrastructure and Law website—is designed for task team leaders and other operational staff of the World Bank group working on the planning, design, and structuring of infrastructure projects, especially those involving the private sector. Resources on the web site address contractual and legal issues associated with infrastructure reform and PPP projects, and provide practical guidance notes and checklists.

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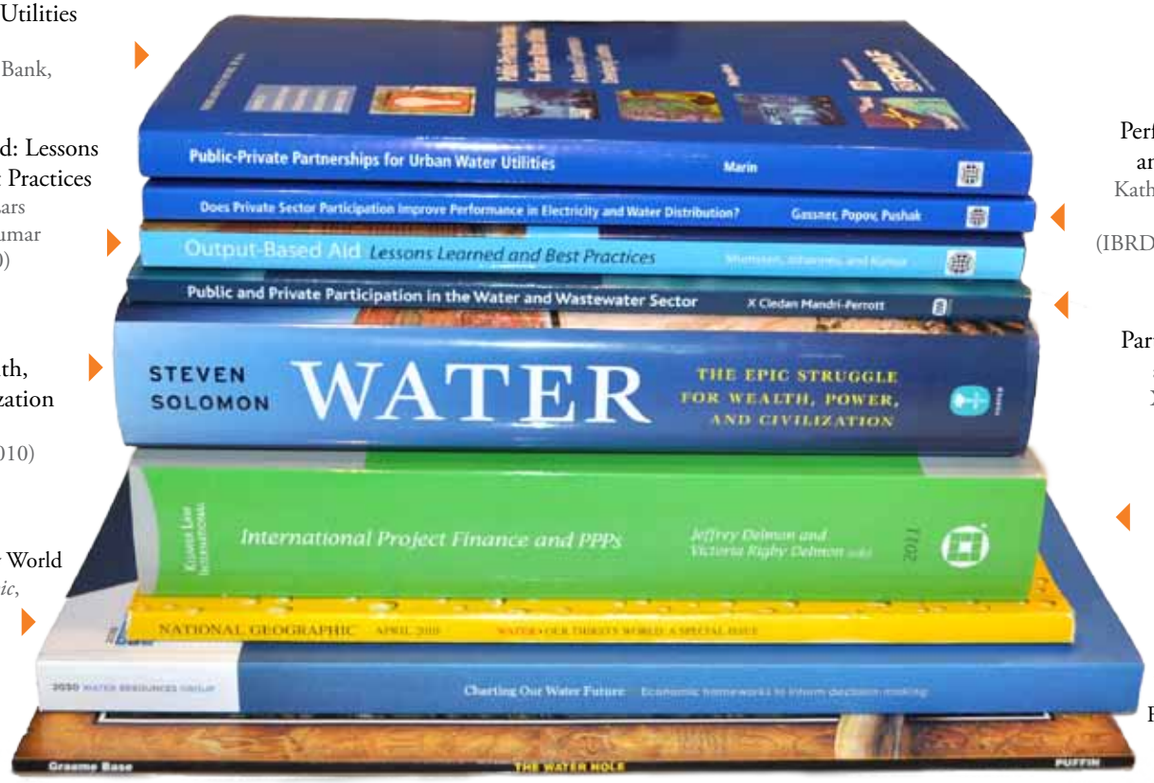

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Photo © Pipowitz

The last word

By Nico Saporiti

The intake of the Villoresi irrigation canal is a monumental structure of classical beauty: it tames the blue waters of the River Ticino, just below the outlet of Lake Maggiore, and quenches the thirst of 85,000 hectares of otherwise dry land to the north of Milan.

This imposing project was designed, financed, and built entirely with private capital between 1877 and 1890. A 90-year concession was granted by the King of Italy only 15 days after receiving the investment proposal from the original investors. The original structure of the concession contract included the option for the water off-takers to buy out the concession. This option was called in 1918 when the farmers formed a consortium of water users and took over the concession and the infrastructure.

With such a head start in the development of water sector PPPs, one would imagine that in Italy such contracts would be widespread and well known. In fact, the opposite is true, and the political debate around the meaning of private sector participation in water services is as heated, alive, and confused as ever. A leading national newspaper printed, in the same edition, one article broadly supportive of a popular movement against private involvement in water service providers, and another article denouncing a case of pollution by a (public) water company that had been discharging untreated sewage and hazardous waste in the Bay of Naples.

Misunderstanding and strong opinions are not limited to Italy. Regardless of location, government officials wishing to implement a water PPP must begin with realistic expectations. Here are a few:

- Private investors have a strong profit incentive to introduce operational and investment efficiencies, but ...

  Operational efficiencies cause a redistribution of economic benefits, from the sources of waste (overstaffed workforce, suppliers and contractors, water thieves, corrupt staff) to consumers (reduction in tariffs) and to investors (profits and dividends). The beneficiaries of the status quo, in the broader sense, will lose out from the transition to a PPP model. Operational efficiencies typically offset only a portion of the economic burden on the end consumers of the transition from heavily subsidized operations, to a full-cost recovery model.

- Private investors can mobilize a significant amount of private capital to fund new investments, but ...

  They expect those investments to generate a positive economic return, and generally have much higher return expectations (i.e., capital costs) than the public sources of funding.

- Private investors are more efficient in selecting and implementing (on time, on budget) capital investments, but ...

  Have limited ability to promote the awareness among public consumers of the often intangible or delayed (long-term) environmental benefits brought by expensive capital investments in waste water treatment, leakage reduction, or drainage management.

Private investors cannot miraculously break the economic balance in play among tariff revenue, operating costs, subsidies, and cash available for investments. It is unreasonable to expect private operators to transform, in a few years, a loss-making, subsidy-dependent water company incapable of maintaining its asset base. It is even more outrageous to expect them to transform into a profit-making making company capable of financing new investments, without a tariff increase to reward the capital investment or a capital grant to subsidize tariff levels.

Perhaps most important is that private-sector participation and investment in the water sector is not a substitute for sector reform and regulatory oversight, which is invariably a prerogative of the government. For the private investor to produce strong results, its public sector counterpart, the regulator, needs to be equally empowered. Local sensitivities and the specific technical and economic conditions of each operation require careful and continuous adaptation. This is the lesson from the 120-year-old Villoresi irrigation canal, which was successfully designed, financed, constructed, and operated for many years by private investors, and is now successfully owned and operated by a consortium of public entities. ♦

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