ADB's Experience on Private Sector Participation in the Water Sector: Progress and Challenges[1]

1. Overview

For over a decade now, private sector participation (PSP) in water supplies has been a hot topic. Many governments have recognized, somewhat reluctantly at times, that private financing could bring greater efficiency to management and jumpstart the improvement or expansion of much needed water services, all without decreasing the role of the public sector. Development agencies and the private sector have done their bit to promote—even hard sell--- the practice. And some segments of civil society have taken to the streets to stop it.

This paper will briefly retrace the arguments for PSP, give an overview of Asia's experience in it, discuss ADB's water projects with PSP components, especially private-public partnerships, and offer insights on how to move forward with the process.

2. PSP in Water: Premises and Promises

Asia is home to over 700 million people without access to safe water and 2 billion without adequate sanitation. The Millennium Development Goals (MDGs), specifically target 10, call for halving these numbers in less than 10 years.

Who will pay for this? Who will ensure that water and sanitation services are sustainably operated and maintained?

Governments are often not able to finance the large investments needed in the water and sanitation sector. Worse, their water operations are burdened by the usual limitations of public management—lack of technical capacity, inefficient management, inadequate technologies and so on--- generally resulting in inadequate O & M, infrastructure degradation, low service quality, low tariff and low cost recovery.

PSP promises to counter these conditions by bringing greater efficiency to management, and autonomy of operations through legal contracts. The private sector can bring in investment funds, freeing up government resources for other public services. It can also bring in initiatives and market-oriented behavior to improve performance and efficiency, management expertise and technologies.

The involvement of the private sector in the water sector can take various forms, e.g. service contracts to reduce water losses, leases or concessions to operate water distribution systems, and build-operate-transfer (BOT) schemes to provide bulk treated water to local water utilities.

[1] Presented by William Costin, ADB Principal Project Implementation Specialist, at the Southeast Asia Water Utilities Network (SEAWUN) Inaugural Convention on Water and Wastewater; 7-9 June 2005; Hanoi, Viet Nam.

3. PSP in Water: The Asian Experience

Asia's recent experience with PSP in the water and sanitation sector (WSS) offers mixed results.

In Male', the Maldives government signed a joint venture agreement with NTR Holding/HOH Water Technology (Denmark) in 1995. The latter managed for 5 years the Male' Water & Sewerage Company Pvt. Ltd. (MWSC), the entity that produces and distributes desalinated water in Male' on a commercial basis, and provided all the hardware inputs by turnkey delivery. In turn, the Government granted the company a monopoly concession for all public water supply and sewerage services for a period of 20 years. Despite a tariff increase that rose up to US$6.40-- the highest water tariff in Asia-- there was a big increase in both the number of customers and the use of water. MWSC reached break-even point in April 1997 and by June 1999 had recovered all losses from the starting period.

In Indonesia, the government has been undertaking PSPs in waters supply since the 1980s, but mostly on a small scale, such as for meter reading, bill collections, and maintenance work. But in 1998, large-scale PPP in the form of concession contracts split Jakarta's water supply into two. The contracts were awarded to Suez Lyonnaise des Eaux and Thames Water. Local partners originally joined the concessionaires but later relinquished their shareholdings after the change in Indonesian government. NGOs claimed that the concessionaires were not investing their own money in capital works but were using instead the money collected from consumers. The legality and fairness of the contracts were questioned, which led to renegotiations. Both concessionaires have been grappling with the consequences of the Asian financial crisis and low tariffs.

In Macau, there are approximately 500,000 people and 170,000 water supply connections. Originally put under private management around 100 years ago, the Macau Water Supply is regarded as one of the best examples of a water supply run by the private sector. The concessionaire is 85% owned by Sino-French Holdings Ltd., which comprises Lyonnaise des Eaux (50%) and New World Group (50%). Rapid development of the service in the late 1980s was seen as a major catalyst in spurring economic growth. Major achievements include reducing NRW from 48% to 11%, introducing European water quality standards, increasing connections from 55,500 in 1985 to 170,600 in 2000, and increasing production from 85,000 m^3 per day to 265,000 m^3 per day. The average tariff is now around \$0.60/m^3. Recently, though, there have been some problems with the raw water source and upstream pollution in the PRC.

In Ho Chi Minh City, three BOT contracts for bulk supply of treated water were signed in 1995, 1997, and 1999. This is a "take or pay" deal, but there was a mismatch of production and distribution capacity, so the water company had to pay for water that could not be sold. One of the BOT operators has pulled out due to financial difficulties.

The region is peppered with countries undertaking PSP in various forms. The experiences have shown both promising and disappointing results. But what all these indicate is that the process needs to go through more refinements to ensure that the right enabling environment for private-sector led growth is in place.

4. ADB: Providing Safe Water through PSP

How does ADB view PSP?

ADB actively pursues service efficiencies, and sees private sector participation as a way of attaining these efficiencies.

It's private sector development strategy has three major objectives: to create enabling conditions for private businesses to thrive, to generate business opportunities for the private sector in ADB-financed public sector projects, and to catalyze private investments through direct financing, credit enhancements, and risk mitigation instruments.

ADB's water policy, Water for All, supports these objectives. In particular, it calls for creating an enabling environment for private participation in the water sector, and helping to develop the safeguards that ensure equitable access for the poor. The policy bids ADB to undertake the following activities:

- promote build-operate-transfer (BOT) and build-own-operate (BOO) projects from its private sector window, through international or local competitive bidding
- assist developing member countries (DMCs) to identify suitable projects for private sector financing and to engage concessionaires
- promote contracting out specific operations to the private sector to maximize the efficiency of publicly owned and managed water service delivery systems
- develop modalities for public-private partnership in the management of physical infrastructure

What are ADB's general modalities for supporting PSP?

There are several ways in which ADB can assist private sector participation. The traditional forms of assistance are equity investments in and direct loans to a project company.

ADB can also provide credit enhancements to cover risks that are not easily managed by the private sector. Political risk guarantees are designed to facilitate commercial co-financing by covering specifically defined sovereign or political risks.

Partial credit guarantees can be tapped for projects considered fundamentally credit-worthy and sound by ADB, but where long-term funds on reasonable terms cannot be obtained from commercial lenders in underdeveloped local financial markets. Recently, ADB has begun to offer in selected countries debt financing in local currency for infrastructure projects.

What is ADB's PSP experience in the water sector?

ADB's experience in PSP in the water sector covers a wide ground—from providing technical assistance to developing a regulatory framework for private and public water supply and wastewater enterprise in Indonesia (TA 6761) to generating funding through tariffs in PRC (TA 3751); from enabling Philippine local governments to attract private funding (Loan 1729-PHI) to implementing public-private partnership (PPP) models such

as BOT and concession schemes. This paper will discuss in detail these two PPP models—both with their share of successes and failures.

4.1 BOT scheme: Chengdu Water Supply, PRC (Loan 1669)

The BOT model is increasingly popular in many countries. BOT has introduced private sector discipline, and has increased efficiencies in construction cost and labor management. Without BOT, many projects could not have been carried out because the public sector lacked sufficient funds.

A clear example is the ADB-financed Chengdu Water Supply Project, the first BOT case in the People's Republic of China (PRC).

In many of PRC's cities, water demand outstrips supply capacities. Strong growth, industrialization, and rapidly increasing standards of living were big contributors to this situation. Recognizing that it doesn't have the financial means to invest in the necessary water infrastructure and services, the Government promoted private sector participation, both foreign and domestic.

For its first pilot BOT project in the water supply sector, the Government asked ADB's technical assistance in developing the Chengdu Water Supply Project.

Chengdu is the capital of the Sichuan Province in PRC. It is the second largest city in southwest China and has serious water shortages.

The project's goal is to provide a reliable supply of treated water to nearly three million residents in Chengdu. Under an 18-year concession, the project constructed one of the most modern water supply plants in China with a capacity of 400,000 cubic meters per day. After 18 years, the plant will be transferred to the Chengdu Municipal Government. The project included additional facilities like water intake works and a 27-km transmission pipeline to the city.

The plant was completed in February 2002 and has since then been delivering its contracted capacity to the Chengdu municipality, providing an additional source of clean water to the residents.

What was ADB's role?

Through technical assistance support to the Chengdu Municipal Government, ADB helped ensure that the basic elements of transparent bidding were observed, that the lowest feasible tariff was obtained, and that the project fundamentals, such as tariff increase to enable cost recovery, were in place. This project was not just the first BOT for PRC; it was also ADB's first private sector project in the water sector.

ADB was instrumental in structuring the finance for the Project, estimated to cost US$ 106.5 million. Besides its own direct loan of US$ 26.5 million, ADB helped secure debt funding commitments from seven commercial banks under ADB's complementary financing scheme (US$ 21.5 million).

In addition to ADB, the European Investment Bank (EIB) provided financing for the Project, and external commercial lenders guaranteed the commercial risks.

The borrower was Chengdu Generale des Eaux-Marubeni Waterworks Co. Ltd, a company sponsored by a consortium of Vivendi (60%) from France and Marubeni Corporation from Japan (40%). The bidding process was transparent.

What were the achievements and lessons learned?

The significance of the Project is mainly based on the fact that it boasts a number of 'firsts':

- First urban water supply project awarded under an open bidding system within the BOT scheme
- First official BOT water project to reach financial closure in China
- First major BOT water project in which the sponsors and lenders are taking municipal risk
- First PRC project financing in which EIB has extended one of its credit schemes to a project in China

The project shows that the BOT structure can be implemented at municipal level and can be funded without any central government guarantee. It gave important signals for private investment in infrastructure projects in China and has served as a model for similar Projects in the country.

Two significant ingredients for the successful financial closure were the early involvement of the State Development and Planning Commission from the inception of the project and the active participation of ADB. This combination was crucial in avoiding delays on the sometimes thorny issue of Central Government support.

ADB took the lead in creating an innovative financing structure. This allowed international lenders to take a long-term municipal risk in the PRC for the first time. The Bank played a catalytic role in attracting additional foreign lenders to finance this Project. The presence of the Bank reassured foreign investors that both the national and municipal governments would continue to support the project throughout its life.

The basic elements of transparent bidding were observed. Project fundamentals, like tariff increases to enable cost recovery, were put in place.

The project won four awards for excellence in project finance from internationally recognized financial publications in 1999. The rewards were given in recognition of the Project's innovative and superior financing structure that allowed the international lenders to take long-term municipal risks in the PRC for the first time.

All is not roses, though. Contrary to when the project started, water supply in Chengu has now outstripped demand. The city is left not wanting any more water at the moment, but is obliged to buy 400,000 m^3 per day under the "take or pay" contract. This shows the risks government takes with the "take or pay" BOTs.

4.2 Concession: Maynilad Water Service, Inc, Philippines (Loan 1696)

In Metro Manila, the Philippines' capital region, only 60% of the 12 million populace has piped water. The operations of the Metropolitan Waterworks and Sewerage System (MWSS) were turned over to two private entities in August 1997 through concession contracts. The service area was divided into two zones—the east and west. Manila Water Company, Inc won the bid for the east zone and Maynilad Water Services Inc got the west zone.

The PSP process started in November 1995, and the concession agreements were signed in February 1997. This was touted as the largest ever water supply "privatization" in the world, and was driven significantly by the strong political will of then President Fidel Ramos.

Five years into the concession, Manila water has increased coverage from 67% of the population to 89%, improved the availability of 24-hour water service from 26% to 83% of the population connected to the existing network, reduced Non-Revenue Water (NRW) from 63% in 1997 to 53% in end-2001, and adopted low-cost, decentralized sewerage strategy which is more affordable for customers.

Maynilad, too, had some positive results. Water became available on a 24-hour basis to 79%of connected customers, up from 60% at the start of the concession. New connections were made, especially in poor communities and illegal slum areas where residents used to be ineligible to receive water from the utilities because of tenure limitations. Maynilad's Bayan Tubig program enabled them to apply for service connections with a minimum installation fee that can be paid in installments, without having to present property rights or land titles.

But while there have been some improvements in the situation, the performance of both concessions remained below target. Maynilad, though, was doing worse than Manila Water. Manila Water has reduced non-revenue water from 63% to 53%; Maynilad has allowed the initial 63% to increase to 67%. Manila Water has been actively adding connections and improving infrastructure; Maynilad has sought withdrawal from the concession, citing failure to agree on new tariff rates and a moratorium on the payment of the concession fee as factors in its decision to pull out.

In 1999, Maynilad applied for, and was granted, a US$45 M loan from ADB to carry out the many urgently needed investments and improvements to the system. The company has since then withdrawn from the arrangement.

In retrospect, many of the problems encountered in this concession could have been avoided if the Government had a comprehensive policy statement covering all the critical issues of public and private operated water supplies, e.g. tariffs, tariff structure, service levels, serving the poor, transparency, etc, and established a credible regulatory body to monitor the implementation of that policy. As it was, regulation was by contract, which made the regulator merely a contract administrator.

Tariff and cost recovery issues also abound in the concession. At the start, tariffs in the two concession areas were very different, one being about 65% more than the other because of debt service liabilities (Maynilad assumed 90% of MWSS' debts while Manila

Water assumed 10%). Perhaps it would have worked better if MWSS kept the debts in its books, charged the concessionaries a fee to help them with the obligation, and then harmonized the tariffs.

Allowing bidding to be based on the lowest tariff also sent the wrong signal—that there is no need to conserve water. The tariff structure adopted did not penalize high consumption.

Nor did the concession penalize non-performance. Targets related to access to piped water, investment, and 24-hour supply have not been met, and sewerage coverage has scarcely begun. Current tariffs have gone way past the original MWSS rate. But only approximately 60% of Manila's population has piped water, and only around 88% of these have 24- hour supply. The rest rely on wells or purchase water for small water providers (vendors, trucks, small piped water networks). Roughly 7% have access to sewerage. Non-revenue water still averages at 60%.

5. Internalizing the Lessons Learned

Many lessons could be derived from the two experiences cited. But the paper will only focus on three major factors that will facilitate PSP in the water sector.

The first concerns adequate policies, legal instruments, and standards. Second, the need for capable regulatory bodies. And third, the issue of tariff reforms.

In the first area, transparent government policies and legal instruments are needed to enable private sector participation, together with standards for coverage of water supply systems, service levels, operator performance and incentives. Policies and standards also need to be communicated to the water users. ADB recognizes the active role of NGOs, civil society, and academics as monitors of policy implementation.

Secondly, credible regulatory bodies are critical for improving water services, and even more so when private sector participation is pursued. Regulation by contract is, in ADB's experience, often a less than satisfactory arrangement. ADB supports the establishment and capacity building of regulatory bodies, to help achieve agreed service and performance standards, to protect consumers from excessive tariffs, to assure investors that contracts are enforced, and to control corruption.

In ADB's experience in establishing regulatory bodies, there is no universal model suitable for all conditions, and that regulation is an evolving process. ADB has just completed a Technical Assistance (TA 3703) to build the capacity of the Regulatory Office of MWSS.

The third important issue is promoting recovery-based tariff. Higher tariffs are often the make-or-break condition for services to improve, regardless whether the system is publicly or privately owned. They also help generate financial resources for system expansion and improvement. Water tariffs are more often than not based on political considerations and vested interests, instead of on the economic value of water and the actual costs of producing and delivering water to the consumer.

Tariffs are the 'lifeblood' of service providers. Tariffs should be controlled by regulatory bodies. Adequate tariffs are critical to operate and maintain existing systems, and contribute to new capital investment. Without the funds generated by recovery-based tariffs, poor and disadvantaged communities often remain unconnected to piped water systems.

In discussing tariffs, it must be recognized that the connection fee can be a burden to poor households. Options should be studied to lower this burden, for example through cross-subsidization. However, ADB's experience still reveals that even for poor consumers, paying the higher tariff is usually still much cheaper than having to continue buying water from vendors at exorbitant rates.

6. The Way Forward: How ADB Can Continue Supporting PSP in the Water Sector

ADB believes that PSP is still very much alive despite high profile conflicts and exits from Asian projects by several global water companies. But we also recognize that even where the climate for investment is positive and PSP strategies exist, many governments still have tremendous difficulty with the process of PSP.

ADB's involvement in both public and private sector operations uniquely positions us to promote partnerships between private and public sector players. And this is exactly what we will do.

Our Private Sector Department has made good progress in assessing demands for new services and developing new opportunities for subsovereign projects in the Philippines, Thailand and PRC. Early stage initiatives are also under study in Kazakhstan and India.

To complement already existing PSP windows, we will continue to develop new mechanisms to meet new sovereign and sub-sovereign needs in financing. For instance, we have just developed a mechanism for local governments in the Philippines to obtain assistance in preparing and arranging competitive tendering proposals for infrastructure projects under the Private Infrastructure Development Facility for Local Government Units (LGUs). We also recently approved an equity investment in the LGU Guarantee Company to help increase its capacity to credit enhance bank loans and bon issues of local governments in the Philippines. We are now studying how small piped water networks, which provide services to those not covered by water utilities, can be strengthened to increase people's access to safe water.

ADB is committed to facilitating investments in the water sector. As such, we will continue to support PSP in the water sector to realize our vision of Water for All.

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