

**THE MANILA WATER CONCESSIONS
AND THEIR IMPACT ON THE POOR**

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Summary

Metropolitan Manila's water and sanitation network was privatized in 1997 under two separate concession arrangements. While these are still early days, there appear to be several encouraging developments for low-income residents. The most apparent is that the number of households connected to the network has increased by more than 15% -- bringing benefits to an estimated 1.5 million people. Progress has also been made in making the system more efficient and reliable, with water now flowing 24 hours per day in most areas.

While the contracts do not offer specific incentives for reaching the poor, they include an aggressive program of expansion aimed at nearly universal water service coverage in the first five years. The agreements also provide the concessionaires with enough flexibility to pilot new approaches to service provision in some of the city's poorest neighborhoods. This is important, since physical conditions make traditional methods impractical in certain areas. The contracts also allow for third party provision. One of the concessionaires has entered into agreements with a company that provides an innovative service in neighborhoods where the water network is not yet present.

Continuing success will depend in part on the challenges that lie ahead. One of the most pressing involves the tariff structure, which may come under pressure when sanitation charges are increased in January 2003. The expected increases will provide an opportunity to revisit the increasing block design, which does not reach the poor effectively. At the same time, higher prices may benefit third party providers who will become more competitive (relative to the network), and hopefully more experienced as time goes by. Continuing innovation and partnership between concessionaires and third party providers would appear to be critical for reaching poor neighborhoods quickly with affordable and cost-effective service.

Historical and political background

The process of privatizing Manila's water services unfolded in a context of political and public support, the basis for which can be traced to the downfall of President Ferdinand Marcos in 1986. With the public's tolerance for corruption and economic mismanagement at a low, the administration of Corazon Aquino that followed Marcos' departure undertook several important reforms, including a program aimed at privatizing hundreds of state-owned enterprises. Aquino also sought to attract private investment in infrastructure and enacted a law providing the legal basis for Build-Operate-Transfer contracts. In 1992, the Ramos administration continued these reforms by opening the country to large-scale international investment, and by encouraging private sector participation in infrastructure. In an effort much applauded by the public and the business sector, his government engaged the private sector in building much needed electric power capacity. This brought an end to frequent brownouts and solidified political support for further partnerships with the private sector.

By 1995, the stage had been set for reform of Manila's water and sanitation sector. Water service coverage in the metropolitan area was one of the lowest among major Asian cities.

Only two-thirds of residents were connected to the intermittent, low-pressure water system and less than 10% were connected to the sewerage system. The financial situation was also weak. Non-revenue water was at 55% due to leakages, faulty meters, illegal connections and an inefficient billing system. The Metropolitan Waterworks and Sewerage System (MWSS), the public utility serving the capital, was very heavily indebted. It was also heavily overstaffed and had a history of labor troubles. With the population of Manila already at 11 million, and estimated to double over the next 30 years, it was clearly an unsustainable state of affairs.

The privatization process

In 1995 the Government enacted the Water Crisis Act, which set the legal framework for radical change in the sector. One of the country's leading papers, *The Manila Standard*, wrote that consumers "*had grown convinced that no other arrangement could be worse than the present situation...in which the poor bear the greatest economic burden of bad water service.*" Encouraged by the experience in the energy sector and the water concession in Buenos Aires (see the Buenos Aires case study in this series), the government decided to take MWSS in the same direction. The key objectives were to rapidly improve quality and efficiency, expand services, reduce water tariffs and end expensive government subsidies. A concession format was adopted because the government wanted to transfer operational responsibilities, including debt servicing, without giving up ownership of assets.

With the experience in energy sector and a keen awareness of political sensitivities about privatizing a utility serving the capital city, the government knew the transaction procedure needed to be well prepared. To ensure an unbiased and transparent process, it appointed the International Finance Corporation to advise the government and to design a contract. Between November 1995 - July 1996, an interdisciplinary team of lawyers, engineers, accountants and economists drew up a design for a 25 year concession.

To be sure, the team decided it would be best to divide the city into two service areas as a basis for two separate concessions. Zone West, including old Manila and the southern province of Cavite, represented 60% of the population – including the vast majority of the city's poor. Zone East, made up of the wealthy business district of Makati and the expanding suburbs in the eastern part of the city, accounted for 40% of the population. This arrangement had the advantage of promoting competition, providing scope for performance benchmarking, and of allowing one concessionaire to take over (temporarily) if the other failed to meet its obligations. The total investment required for both concession areas was estimated at US\$7 billion.

Four international consortiums passed a technical pre-qualification stage. When bids were opened in a public ceremony in January 1997 the clear winner of both concessions was a consortium of Ayala (Philippines), Bechtel Enterprises (US) and United Utilities (UK). However, the terms of the bidding process specified that a single bidder could not be awarded both concessions. So, the Ayala consortium (Manila Water Company, Inc. (MWCI)) was awarded the East Zone with a huge 73.6% tariff reduction, while the West Zone went to the runner up, Maynilad Water Services Inc (MWSI), a consortium led by Benpres Holdings

(Philippines) and Lyonnaise des Eaux (France). MWSI had proposed a tariff reduction of 43.4%.

In August 1997 MWSS handed over to the new concessionaires. A Regulatory Office was established to monitor and enforce them, implement rate adjustments, and deal with customer complaints. The office is headed by a Chief Regulator with four deputies to supervise technical, financial, quality assurance and customer rights and legal matters.

Socio-economic indicators in the West Zone at the start of the concession

- Population of the entire concession : 11million
- Population of the West Zone: 7.2 million
- Average monthly income for Manila: US\$ 260
- Average monthly income in low-income areas: US\$ 133
- Population below poverty line: 0.8 million
- 80% of low-income households have no legal property rights

The main features of the contracts

At the heart of each of the contracts is the concessionaire’s obligation to provide water and sewerage services to an increasing proportion of Manila’s residents. MWSI and MWCI are directed to maintain service to existing customers and to **expand service** (via “new connections”) to additional households according to a detailed set of targets. Expressed as a percentage of population, these targets are provided for each municipal unit within the two service areas for each five-year period of the term of the agreements. Expansion to additional commercial and industrial customers is not specifically mandated. By disaggregating the service areas by municipality, and setting specific targets for each of these, the concessionaires are required to invest in poor as well as rich parts of the city.

Expansion Targets for the West zone of the concession

(expressed as a percentage of the population)

Year	Water	Sewerage
1996	62.0	13
2001	87.4	16
2006	97.1	20
2011	97.4	21
2016	97.7	31
2021	98.4	66

The concessionaires must meet **specified standards** (“output standards”) for water pressure, reliability and quality and for customer service. Technical standards (“input standards”) for

construction methods, pipe diameter and the like are not described, although one of the concessionaires has indicated they are required to follow MWSS guidelines established before privatization. As we will see in the next section, these standards have not prevented the development of innovative services intended to reach poor neighborhoods.

The contracts provide for some degree of **flexibility in the type of services** that may be offered. In areas designated as “depressed”, coverage targets may be met by the installation of public standpipes. The contracts state that for the purpose of the targets, each standpipe is the equivalent of serving 475 people. This is specified in a footnote to the schedule of targets in each of the contracts.

The contracts provide the concessionaires with **exclusive rights** to serve customers in their respective service areas -- including municipalities for which there is a less-than-100% coverage target. Each contract nevertheless allows for third party provision as long as the activity is properly licensed and the concessionaire consents. This has enabled at least one company in Service Area East to provide a low-cost service to neighborhoods not currently served by the network.

The concessionaires are committed to the same **tariff structure** that was used by MWSS, an increasing block system that distinguishes among residential, commercial and industrial customers. Purely residential consumers are charged 20% of what industrial users pay for the first 10 cubic meters (Cu. m.) of water, a difference that almost disappears at much higher quantities. Residential customers pay more than 4 times the per unit price for quantities above 200 Cu. m. than for the minimum quantity of 10 Cu. m. The intention is to charge higher prices to customers demanding high quantities of water, and lower prices to others, with the assumption that the latter group is poorer.

Connection charges are 3000 pesos (or about \$100 in 1997) for households within 25 meters of the line. Households farther than this can be charged a higher fee reflecting the cost of making the connection. Concessionaires can offer customers the option of paying in installments over a period of up to five years. An environmental charge of 10% is levied on the water bills of all connected consumers, regardless of whether they have a sewerage connection. For those with a connection, a sanitation charge of 50% is also added. In January 2003 the sewerage charge will increase to 150%, and the sanitation charge will rise to 75%.

Concession Fact File

Expansion mandate

- Expansion mandates for water and sewerage specified in terms of population coverage targets for each municipality, specified for each five year period.
- Sewerage targets not as high as for water; new infrastructure will gradually replace septic tanks.

Standards

- Water quality must conform to the National Standards for Drinking Water
- Water reliability must be at 24 hours/day by June 2000
- Detailed standards of water pressure and flow

Tariffs and connection fees

- Progressive tariff structure
- Tariffs can be renegotiated every five years; annual adjustments for inflation and exceptional events.
- Maximum connection fees of \$106 each for water and sewerage; installment plans permitted

Financial

- 60% of equity must remain in Filipino ownership
- Concessionaires assume responsibility for 90% of MWSS's debt burden

Labor

- Comprehensive labor transition package under which:
 - all employees who are rehired have a 6 month probation period
 - those who fail the probationary period receive retirement pay and other benefits
 - all employees are entitled to stock options
 - existing labor unions are automatically recognized

Other

- New Regulatory Office to monitor concessionaires' performance, arrange regular independent technical and financial audits and respond to consumer complaints
- Guarantee of raw water availability to the operator
- Appeals panel to settle unresolved disputes

Addressing the needs of the poor

Although serving the poor was not the primary impetus for privatizing Manila's water and sanitation system, the contracts demand very high coverage and do not restrict the concessionaires from using innovative strategies to serve the poor. The contracts also allow for third party provision.

Expansion mandate. The targets set out in the contracts aim at a high rate of service coverage. In Service Area West the goal is to connect 98.4% of the population, and in Service Area East it is 94.6%. Motivated by the prospect of profits and the penalties, the concessionaires have sought to achieve these targets, and in the process many low-income households have benefited. It is unclear whether certain neighborhoods have nevertheless lagged behind others, due to physical conditions or low demand.

The expansion mandate prioritizes water connections over sewer connections. The latter are scheduled to increase only slowly for the first five years of the concession. As of August 2000, sewer expansion to low-income neighborhoods in MWSI's service area had not begun, and demand for sanitation -- which is likely to be expensive -- had not been assessed. The operator is drawing up a master plan that will provide guidance on options for sewerage extension. Possible pilot projects in low-income areas are under discussion with the Asian Development Bank and the World Bank. The cost of expanding the network is due to be passed on to customers from January 2003, and could prove to be unaffordable for poorer households.

Service types and standards The concessionaires' interest in serving particular areas (or in

serving them more quickly than others) is in part dependent upon the types of services they are permitted to offer, and the technical standards they must follow. The contracts are not entirely clear as to what constitutes a “new connection,” nor as to what technical standards are required. Specific reference is made to standpipes, stating that targets may be met by the installation of one unit for 475 people, or about 100 households. Innovative methods for connecting households also seem to be acceptable, as evidenced by MWSI’s Bayan Tubig program (see Box 1), and by the activities of Inpart Engineering in MWCI’s service area.

Standpipes are the only alternative technology specifically mentioned in the contracts. While this provides a flexible service option for low-income areas that may not be able to afford individual connection fees, it adds a level of complexity since such devices serve multiple households and must be carefully managed. The contract does not address standpipe management, which varies a great deal across metro Manila. Officially, management is delegated either to the baranguay, (the sub-municipal level of government) or to a community-based association – often a cooperative. In reality standpipes are sometimes controlled by private operators, often with the blessing of local officials. Because of this, and because higher consumption levels push the official rate to the highest possible level for residential consumers, prices at the standpipe are often very high. Since standpipes tend to be in poorer areas, the poor end up paying substantially more per unit of water – for a service that is inferior to a household connection. A 1996 study indicated that connected households spent 4 to 13 times less per month on water than unconnected households.

In an effort to identify an alternative to standpipes for reaching the poor, MWSI has developed a condominium-style system for water delivery not unlike that in El Alto (see the La Paz case study in this series). The technologies used in the Bayan Tubig scheme place small diameter pipes running from the main to households on the surface or along walls, and assign maintenance responsibility to customers. The company offers installments plans to help customers pay off connection fees over several years. The program had provided water

Box 1: MWSI's Bayan Tubig scheme

The Bayan Tubig (“Water for the Community”) project, initiated in early 1999, has been devised to serve hard-to-reach households. An underground line carries water service to the perimeter of a neighborhood, and is then extended above ground -- partially covered, attached to a wall, or lying on the surface. The line connects to a battery of meters from where each homeowner makes their own plastic connection (see diagram). One advantage of this arrangement is that illegal connections are easy to identify.

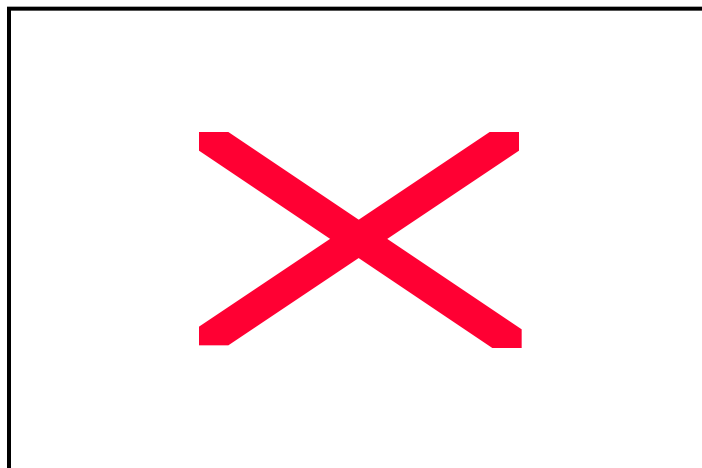
Strong local partnerships are an essential part of the implementation process, with community based organizations and NGOs playing a key role in intermediation and network mapping. The barangays (sub-municipal government level) must approve all requests for service; the concessionaire then finances, constructs and maintains the infrastructure. Criteria for establishing a Bayan Tubig scheme include the following:

- The area is reasonably close to the primary network;
- Beneficiaries are not located in an area liable to flooding;
- The scheme is technically feasible; and
- The site is not on private land where questions of tenure pose problems.

Residents in many slum settlements lack property titles, but where the land is public the National Housing Authority has a policy of regularizing tenure. To speed up the process of individual connections, the operator has reduced the number of official papers required and (most crucially) will proceed without property titles. This initiative has simplified the procedures and introduced time and cost savings which benefit poor consumers and the concessionaire alike.

The long-term sustainability of the program has not yet been tested, but early evidence is encouraging. There is strong demand for individual water connections, due in part to the inflated cost of water from other sources and to the significant savings in time. Cost recovery rates are high, and disconnection for non-payment is well below what it is in more affluent areas. Estimates suggest that the Bayan-Tubig connections have reduced water costs for poor families by up to 25%; a figure that explains the popularity of the scheme despite high connection costs of US\$ 97. As an incentive to connect, and to make the scheme more affordable, the concessionaire has introduced an interest free repayment scheme over a - 24 month period.

Diagram of the scheme



connections to 19,000 poor households by 1999 and expected to add another 33,000 in 2000. See Box 1 for more details.

In MWCI's service area, an enterprise specializing in production of steel has set up neighborhood water supply systems. Using water from the main network, Inpart Engineering uses plastic hoses and small pipes to connect its customers to tanks that it builds on land provided by the communities in which they work. Agreements are made with local authorities and MWCI, who are paid for the water on a bulk basis. Water vendors formerly active in the neighborhood are hired to collect bills. The technology is more basic than what is normally used to connect households, but has nonetheless been proven effective.

Exclusivity and third party provision. The contracts allow for third party provision and may even encourage it. In the section on exclusivity, the contracts state that a concessionaire may consent to the granting of a license to a third party to operate in its service area. While this may not provide immediate opportunities for the smallest firms, it enables larger ones to gain experience and to demonstrate alternative approaches. This is important for low-income consumers, since many live in hard-to-reach settlements and depend on the services of small-scale providers.

Coverage requirements are structured in a way that give the concessionaires an incentive to encourage third party provision. This is because coverage targets are partially fulfilled when any party serves new customers with a legal connection. The contract specifies that, "...the Concessionaire shall make at least sufficient connections... to meet coverage target percentages... (excluding users who obtain water from a legal source other than the MWSS system)..." The exclusion of users who obtain water from "a legal source other than the MWSS system" means these people are dropped from the equation determining the proportion of connected households. In this way, a smaller unserved population helps the concessionaires' make progress toward their coverage targets.

Tariff structure and financial viability

Tariffs for all network customers fell significantly after privatization -- even after accounting for an across the board increase of 38% just five months before the August 1997 handover -- and provided benefits irrespective of income. While the total price of service is likely to increase in January 2003 with the introduction of higher charges for sanitation, privatization has brought about improved efficiency and enabled the benefits to be passed on to all customers.

The increasing block tariff system is meant to provide ongoing benefits to the poorest customers on the network, but may in fact fall short of this. There are several problems with the structure. Firstly the initial block of 10 Cu. m. may not really benefit those it was designed to serve. In practice, only 20 to 25% of low-income households have individual connections; the rest rely on high-cost vended water. Many of the poor also use shared standpipes, where total water consumption pushes the price paid up to the high end of the block structure. In addition, the initial minimum block of 10 Cu m. per month is higher than typical usage of very poor households, estimated at three to five Cu. m., effectively doubling the unit price of water for the poor (US\$ 0.102) relative to better off households consuming 12 Cu. m. (US\$ 0.0525).

**Tariff rates for residential consumers in Service Area West
(Rates in the West Zone are about half)**

	Pesos per month	US \$ per month	Additional Charges
First 10 cu m	20.63	0.51	+ 50% for sewer connection +10% for environmental charges
Next 10 cu m	2.51 per cu m	0.06 per cu m	
Next 10 cu m	6.02 per cu m	0.12 per cu m	
Over 200 cu m	8.74 per cu m	0.22 per cu m	

Increases in tariffs and related charges may threaten the poor's access to water and sanitation services in future years. Large increases in the sanitation and environmental charges (to 150% and 75%, respectively), due two years from now, may coincide with pressures to cover the cost of augmenting the current supply of raw water. The two contracts make reference to a project to increase supply, but the high costs may force an increase in tariffs.

Outcomes, successes and limitations

While it is too early to evaluate the benefits that the Manila concessions have had for the poor, three elements of the agreements have clear relevance: the expansion mandate, the tariff structure and the degree of flexibility afforded to the concessionaires. These are important not just because they influence the behavior of MWSI and MWCI, but also because they also affect the role of third party providers.

There is no shortage of successes. For one, the rapid increase in coverage -- expected to be in line with goals set for the end of the first five-year period in 2001 -- is an achievement whose impact on the poor should not be underestimated. MWSI's introduction of the Bayan Tubig schemes early on in the contract is clearly another success story. Even if cost recovery and large scale replication turn out to be difficult, important lessons will have been learned. These include what constitutes appropriate technology, how to approach institutional arrangements, and which pitfalls to avoid.

Another exciting activity to emerge under these concessions is that of the Inpart Engineering company. Its service appears to be affordable, and employs a technology that may be replicable by other companies. The institutional arrangements appear to support the profitability of service provision, while allocating substantive responsibilities and ownership to local communities. The real measure of success will be the extent to which Inpart Engineering and other companies can expand service on a large scale. Expansion into the low-income areas of the western side of Manila may well test its potential for reaching the poor.

Despite the potential of these and other schemes, reaching Manila's poor on a large scale will require the concessionaires and other service providers to overcome a number of constraints. While not an immediate problem, the January 2003 tariff hike is likely to raise concerns about the affordability of services, as well as the efficiency of the increasing block structure. Another

constraint is limitations on third party provision, in particular the contractual provision requiring the consent of the concessionaires. This is of interest because it creates a barrier to companies wishing to compete with the concessionaires, *and* because the Inpart Engineering experience suggests this does not have to be the case.

References

Asian Development Bank, 1997, "Second Water Utilities Data Book". Asian Development Bank.

Binnie Thames Water/ TGGI Engineer, 1996, "MWSS Operation Strengthening Study." Asian Development Bank

Dahan Stéphane. July 2000. "Project Bayan Tubig. Approvisionnement en eau potable des quartiers à faibles revenus de Manille". Direction Technique et de la Recherche. Lyonnaise des Eaux.

David Cristina. April 2000. "MWSS Privatization: Implications on the Price of Water, the Poor and the Environment." Discussion Paper Series No. 2000-14. Philippine Institute for Development Studies. 58p.

David Cristina and Inocencio Arlene. 1999. "Government Devolution and Privatization: Implications on the Water Service in Metro Manila." Unpublished paper, Philippine Institute for Development Studies.

David Cristina and Inocencio Arlene. Dec. 1996. "Understanding Households Demand and Supply of Water: The Metro Manila Case." Policy Notes No. 96-04. Philippine Institute for Development Studies. 12 p.

David Cristina. 1996. "Water Demand Projections for Metro Manila: A Critical Review." Polyg. The Philippine Institute for Development Studies. 18 p.

Divinagracia Nestor and Provencher Lisette, 2000. "Water Supply in Blighted Areas." Manila. Maynilad Water Services Incorporated. 7 p.

Dumol Mark. Feb. 2000. "The Privatization of the Metro-Manila Waterworks and Sewerage Systems." Presentation made on 7th February 2000 in New Delhi. Seminar on Private Participation in Water Supply and Sanitation organized by the Ministry of Urban Development, Government of India and the World Bank.

Mac Leod Scott, Clamp Tony and Dejonckheere Luc. Fall 1997. "Manila: Private Water Works". In Impact. Vol. 1, No. 2. The International Finance Corporation. Washington D.C.

Whittington Dale and Boland John. 2000. Water Tariff Design in Developing Countries:

Disadvantages of Increasing Block Tariffs (IBTs) and Advantages of Uniform Price with Rebate (UPR) Designs. Draft paper. The World Bank

World Bank. 1997. Memorandum and Recommendation of the President of the International Bank for Reconstruction and Development to the Executive Directors on a proposed loan of US\$ 54.5 million to the Land Bank of the Philippines and on a Proposed Loan of US\$ 2.3 million to the Republic of the Philippines for a Water Districts Development Project.