Special Unit for South-South Cooperation

MANILA, PHILIPPINES, WATER / WASTEWATER IMPROVEMENTS

Case Study (Water/Wastewater)

Project Summary:

In the 1990s water and wastewater services in Manila were unsafe, unreliable and most residents were underserved, while others had no access to the systems at all. In 1995, the Philippine government enacted legislation which allowed Manila's water agency to enter into a public-private partnership. The idea of utilizing the private sector for water/wastewater services came from the earlier successes of President Fidel V. Ramos in mobilizing private resources to solve the Philippines' power crisis in the early nineties. In 1996 MWSS began the process that led to the signing of concession agreements in early 1997. Metro Manila was split into two zones (East and West) to be run by two different concessionaires. The focus of this case study is the concession agreement for the Western Zone.

In 1997 Metropolitan Waterworks and Sewerage System (MWSS) signed a twenty-five year concession agreement with a consortium that consisted of a private Philippine corporation and an international water company. The government hoped that the concessionaire, Maynilad Water Services, Inc., would be able to provide Western Manila's population of approximately six million with an uninterrupted water supply, expand the water and sewerage service coverage and improve access for those who were unable to afford piped water.

After the contracts were signed, MWSS split into two entities: one to manage the concession agreements and another to regulate the concessionaires. Maynilad was responsible for the maintenance, operation and investment obligations associated with water/wastewater services in the western zone as well as paying ninety percent of MWSS's old debts through yearly concession fees. The concessionaire would generate revenue by collecting usage tariffs from consumers, so it had a large interest in regularizing supply and expanding service coverage. Manila's residents strongly supported the concession agreement that promised better service at lower rates.

At first, the concession agreement was effective in increasing residents' access to water and sewerage services, but inefficiencies in the old system, coupled with external factors and a poor outline of responsibilities in the contract put a strain on Maynilad's resources. Nonrevenue water

(NRW), lost through leaky pipes or illegal connections into the system, caused the concessionaire to forfeit millions of dollars in revenue each year. El Niño effects reduced Manila's water supply and the Asian Financial Crisis devalued the Filipino peso, which also hindered Maynilad's ability to generate revenue and pay off debts. In the end, disagreements over contractual obligations led to both public and private sector attempts to terminate the contract.

In 2003 an arbitration court decided that neither side had the authority to end the agreement. Since then, MWSS and Maynilad have continued working together to supply Western Manila with water and sewerage services, but consumers had to pay a large price for this poorly constructed arrangement.

Then, at the beginning of 2007, Maynilad had a change of ownership when a new consortium purchased enough shares in a public bidding to win a majority stake in the water company. Since 2007, Maynilad has made significant advances in new pipeline laid, the number of households connected for 24-hour service and the number of households receiving water at strong pressure. These improvements came after a significant infusion of capital generated by the new owners.

Maynilad's twenty-five year contract to operate the western zone of Manila is set to expire in 2022. In September of 2009, the MWSS approved Maynilad's request to extend its concession contract by 15 years until 2037. However, the approval still needs consent from of the Department of Finance in order to be granted. According to the new consortium owner, the contract extension will enhance Maynilad's ability to undertake long-term projects to improve its future service.

Project Objectives:

By the mid-1990s Manila's MWSS realized that they were faltering in their duty to supply the residents of Manila with safe and reliable water. Under MWSS management, water supply volumes could not keep pace with population increases. Less than sixty-seven percent of households had piped water and water was only available for an average of sixteen hours a day. The lack of water pressure forced many residents to install booster pumps and storage tanks, if they could afford it. Sewer services were equally below standards, with only seven percent of the population connected to the system. Ninety-nine percent of the sewage collected was dumped into Manila Bay without any treatment, causing major environmental and civic threats.

Manila's economically disadvantaged encountered a disproportionate share of the hardships resulting from the poor performance of MWSS. Most of the poor living in Metro Manila reside in squatter communities, where they were excluded from the formal provision of basic social services. Often their only source of water was through profiteers who provided low quality water at substantially higher rates than those charged by MWSS. This unregulated system forced the poor to spend as much as twenty percent of their income on water. Additionally, the lack of immediate access to safe water and proper sanitation led to increased illnesses among the poor and a reduced ability to work.

Part of MWSS's challenge of inadequate water supply stemmed from the fact that sixty-three percent of water pumped into the network was lost through old leaky pipes and illegal connections. Addressing these infrastructure problems required significant funds, which the Philippine government did not have. Another problem was inefficiency and performance problems that resulted from overstaffing within the agency. MWSS employed 9.8 staff members for every 1,000 connections, compared to 1.8 – 2.4 staff per 1,000 connections in comparable countries. Many of the staff members were political appointees, and their salaries drained funds that could have been used for maintenance and expansion of the system. Finally, over time, the Philippine government had borrowed US$800 million from various lenders to invest in MWSS. As a result, the agency became heavily dependent on government subsidies and equity infusions to service its debt obligations. Repaying the loans with interest, coupled with continuous subsidies, placed a heavy burden on the government's budget. MWSS's tariff level and collection rate were not even sufficient enough to support its operating and maintenance expenditures, let alone repaying its debts.

The Philippine government recognized the difficulty of resolving these long-term problems within its limited budget and bureaucratic institutions. The primary objectives of the public-private partnerships, therefore, were to improve the efficiency of the MWSS operations by providing an uninterrupted water supply, expanding water and sewerage/sanitation service coverage, decreasing non-revenue water (NRW) and improving access for those who are unable to afford piped water. It was also anticipated that the enhancements to water service would promote productivity, generate environmental benefits and improve hygiene.

Project Description:

1. Partners

Structure requirements were established for those consortiums that wished to place bids. The concessionaires had to be Philippine companies and the water utilities were to be managed and operated by Philippine nationals. More than fifty percent of the shareholdings should be Philippine-owned, broken down into ten percent for employees, twenty to thirty percent for the main sponsor and twenty percent for the other local investors. Foreign shareholding had to be held at a maximum of forty percent. Finally, a consortium would have to bid for both of the concessions (East and West Zones), but could only win one.

The open bidding process was based on a two-envelope system containing technical and financial proposals. The technical proposals were opened immediately while the financial proposals were opened fifteen days later. The proposals were accompanied by performance bonds of $120 million for the West Zone and $80 million for the East Zone. Bids were made against the existing tariff of PHP 8.78 (Philippines pesos) per cubic meter. Maynilad Water Services, the consortium which won the concession for the Western Zone, was a partnership between a Filipino corporation and a European firm with extensive experience in water/wastewater management and concessions.

Metropolitan Waterworks and Sewerage System (MWSS) is a government-owned corporation in Manila, Philippines. It was formed in 1878 and serves an area nearly three times the size of Metro Manila, which includes six cities and thirty-one municipalities of Metro Manila plus Rizal and parts of Cavite province. As part of the concession agreement, MWSS would retain ownership of the fixed assets and would transfer operation and management facilities to the concessionaires, along with responsibility for future investments such as water source development, treatment, distribution and provision of sewerage facilities.

2. Implementation Environment - Legislative and Administrative

There were two key enactments that paved the way for the water concession agreement in Manila. The Build-Operate-Transfer (BOT) Law of 1993 enabled private sector participation in public works activities. In 1995 the Philippine Congress passed the Water Crisis Act, which gave the president the legal authority to establish a water/wastewater concession. In August 1996, the government was forced to increase water rates by thirty-eight percent in an attempt to establish financial viability for MWSS, but the increase was not sufficient to address the long-existing problems. There was strong public support when the concession scheme was introduced, under which the bidders promised to charge lower rates for better service.

State officials were not familiar with establishing concessions for water systems, so they hired the International Finance Corporation (IFC), part of the World Bank, as a consultant. The IFC was the lead advisor who assisted the government in choosing between concessions or the sale of assets. It was under the IFC's recommendation that MWSS divided its service area into two zones. The setup was initiated to guarantee that if one concessionaire failed, the other could take over the operations, preventing service disruption. It was also a way to ensure that the government could have a benchmark that it could use to assess the performance of the other concessionaire.

Additionally, MWSS was divided into two independent government entities. MWSS Corporate Office (also known as Residual) and its Board remained to carry out limited management and facilitation roles which include oversight of the concessionaires' exercise of MWSS powers, carrying out accounting and notification functions, and administering domestic and foreign loans related to existing projects. Another key function is to manage retained assets, including the ongoing development and eventual operation of large-scale water supply expansion projects.

MWSS Regulatory Office was established to monitor and enforce compliance by the concessionaires of the contractual obligations under the concession agreements, implement rate adjustments, arrange for public dissemination of relevant information, respond to complaints against concessionaires and prosecute or defend cases before an Appeals Panel. They also set the improvement targets that the concessionaires strive to achieve. The regulatory office is composed of the chief regulator and four other regulators to take charge of technical, financial, customer service regulations, and administration and legal matters regulation.

Once Maynilad began operations in Manila's West Zone, the firm altered policies in an effort to increase its customer base and decrease financial loss due to NRW. Under MWSS's original policy, the poor in main squatter areas were technically not eligible to apply for water connections because they did not own the land where their houses were located. Encouraged by the experiences of other countries, which showed that serving poor communities can make good business sense, coupled with the requirements of the agreement to expand the system, Maynilad made three policy changes. First, it simplified the application process and no longer requests a property title from applicants. Second, it allows connection fees to be paid in installments spread over a two month to three year period, for those with limited funds. Finally, Maynilad developed special water supply programs for poor communities including shared meters and public water points, which deliver bulk water to an entire community. These policies reduced the cost of connections and paved the way for regularizing illegal connections in squatter communities, which in turn reduced NRW and benefited the concessionaire.

3. Financial Agreement

Maintenance, operation and investment obligations were all contracted out to the private concessionaires. The companies' payments of equity investments, performance bonds and various fees were intended to free the national government from subsidizing MWSS, which had been the practice for so many years. Local and international partners are required to maintain an equity share of twenty percent for the first five years and ten percent thereafter. The initial cash equity investments for the West Zone were set at US $100 million. A performance bond, to be renewed annually, was set at US $120 million for the West Zone. This bond was to be maintained for ten years, then reduced at each successive rebasing date. The penalty for non-compliance with the concession agreement by the concessionaire would be deducted automatically from the performance bond.

In addition to maintenance, operations and investment in infrastructure, the concessionaires were expected to pay a commencement fee of US $5 million each to cover the fees for the IFC consultation, a yearly fee of PHP 50 million (US $1 million) each to the regulatory office and provide the yearly budget for the residual MWSS, estimated to be PHP 200 million (US $4.25 million). Concession fees are used to repay MWSS debts with the World Bank, Asian Development Bank and other leading institutions. Maynilad shoulders ninety percent of the total debt repayment, while the concessionaire for the East Zone pays only ten percent. The rationale for this may be that a majority of the MWSS loan money was used to finance projects in the heavily-populated Western Zone. Alternatively, this distribution of the debt repayment may serve to make investments in the East Zone more attractive since that area is less densely populated and had low coverage, thus needing more capital investment and providing fewer economies of scale.

4. Contract Provisions

As agents of MWSS in the provision of water and sewerage services, MWSS transferred to the concessionaires the tenancy to land and operational fixed assets as well as exclusive rights to: produce and treat raw water; transport, market and distribute potable water; collect, transport, treat, dispose; and eventually reutilize wastewater, including industrial effluent discharge into the sewage system. Contracts were awarded through a transparent bidding process based on a tariff reduction. Before bids were accepted, a detailed document was circulated, informing potential bidders of specific contract provisions.

- The concessionaires were not to adjust rates, except for inflation, during the first ten years of the concession. Any subsequent adjustments were subject to review and approval by the government.
- There would be room for extraordinary price adjustments (EPAs) in very specific or “force majeure” situations.
- Upstream water treatment plants were to be managed and financed by the concessionaires.
- Long-term debts were to be retained by MWSS, but serviced by the concession fees paid to MWSS.
- Ninety percent of the capital costs would be assigned to the concessionaire operating in the Western Zone.

Customer tariffs, in this case, are increasing block tariffs with a “lifeline” tariff below cost for the first block in order to subsidize poorer customers. The concession is structured for the achievement of gradual performance targets, set for such parameters as water and sewerage coverage in terms of percentage of population served, percentage of wastewater to receive primary and secondary treatment, percentage of water and sewerage network to be renovated, maximum percentage of unaccounted-for water, service expansion and quality of service (i.e. water pressure, continuity of supply and water quality). Under the concession agreement, whatever is transferred, acquired or built by the concessionaires shall remain in the ownership of MWSS, and all such assets will revert to MWSS upon termination or expiration of the agreement. According to expansion mandates, by the end of the contract, ninety-eight percent of those living in Manila would receive safe drinking water and sixty-six percent would have access to proper sanitation.

In order to alleviate some burden from the concessionaires, the government established certain tax incentives. The concessionaires were granted a six-year income tax holiday, a preferential tariff of three percent on capital equipment imports and tax credits on locally fabricated capital equipment until the end of 1997. They are also exempted from local government and franchise taxes and the Value Added Tax (VAT) on the supply and distribution of water but not on provision of sewerage and sanitation, which carries a ten percent VAT. The contracts provided for the “rebasing” of rates every five years, which involved a detailed review of past cash flows and projection of future cash flows to determine how much the concessionaires would be able to charge for water that would be based on the appropriate discount rate of the investments.

5. Implementation Metrics

After Maynilad assumed operations in the West Zone, substantial improvements were observed. The number of water connections increased from 449,234 in August 1997 to 573,194 in 2002. The percentage of those receiving service increased each year during that time, despite subsequent population increases, and by 2002 seventy-five percent of residents in the West Zone had access to water service. Average water availability increased to twenty-one hours per day, while the average water pressure increased from 3-5 psi in 1996 to above 8 psi in 2002. Water quality continually exceeded the prescribed standards and Maynilad was able to reduce the staff-connections ratio to 4 staff per 1,000 connections. They were also able to achieve all of these improvements while reducing water rates by seventy-four percent. Even those households in depressed areas, who could not afford in-house connections, benefited in terms of reduced prices and greater convenience, since a closer water connection was usually installed somewhere in their community. Water consumption increased from the typical two cubic meters per household per month (for households buying from vendors) to twenty-two cubic meters per month per connection through the concessionaire's water program for poor communities. Sewerage connections in the Western Zone increased to nineteen percent of residents.

As of August 2009, there were a total 790,000 households in Manila served by Maynilad, an increase of approximately 75% since the concession agreement. Of that number, approximately 60% have access to 24-hour water service, while an estimated 74% receive water at 7 pounds per square inch (psi), or strong pressure. These percentages mark an increase that can be attributed to the new owners of the consortium that took over in January of 2007. The new numbers represent a significant increase from the previous numbers, 32% with 24-hour service and 45% with 7 psi, seen under the prior ownership.

Both the East and West Zone concessionaires have access to the Angat River, which provides ninety-seven percent of the raw water for Manila, while the remaining three percent comes from groundwater sources. When Maynilad took over operations in the West Zone, they offered their customers various services. Individual connections are the most convenient and cheapest form of water access. Each home within the service area is charged the same rate for water and usage is regulated through a metered system. Maynilad waved the previous land title requirement and allowed connection fees to be paid in installments. Still, many of Manila's poor could not afford this type of connection. Group taps became another option for consumers. Two to five households are covered by one tap and one mother meter while sharing the cost of usage. It is also possible to install sub-meters to help divide up the group cost. This type of connection provides a convenient water source, but allows multiple families to share the burden of connection fees.

Maynilad provides bulk supply connections to community-managed water connections as well as to private water distribution systems. Community water associations run small water distribution systems with an individual meter and their own billing and collections system. This type of connection requires strong community support. Usually the supplier coordinates the project with a barangay official (a barangay is the smallest political unit in the Philippines – several barangays make up a town). The officials explain the project, convince the community to regularize illegal connections and extend necessary support to the supplier. Private subcontractors are also allowed to purchase bulk water and invest in a distribution system. This provides clean water in a convenient location to those without an individual connection, but the consumers are forced to pay a higher price than what Maynilad charges.

The Bayan Tubing (Water for the Community) Program provides water to depressed communities in Manila. An underground line is installed up to the entrance of the neighborhood. The rest of the network is either above ground, on the ground, partially covered or attached to a wall. These lines go up to a battery of meters, from which each user makes its own plastic connection, above ground. The public connections are installed by the concessionaire at no charge to the consumer and the consumers gain access to the system by registering for one of the taps. With this flexible technical option, households benefit from the low cost and convenience of individual connections without having to pay the large connection fee. The supplier benefits because illegal connections can easily be seen and the cost of the system is relatively low since individual connections don't have to be buried underground. Payment default is very rare since the cost is low and households are satisfied with the service.

One of the largest obstacles Maynilad had to overcome was the problem of non-revenue water. NRW was not a key performance indicator in the concession agreement, but was used in the financial bids to estimate future earnings. The bid documents stated that the West Zone had 2,500 kilometers of pipes, but a later study of the network revealed that the actual length to be nearly 4,000 kilometers. Originally, Maynilad believed that the fastest way to fix the problem of NRW was to decommission old pipe lines and lay down new ones. The additional cost of replacing an unanticipated 1,500 kilometers of piping led to the abandonment of this plan. In 1997 sixty-six percent of water was lost as NRW; by 2002 NRW had increased to almost seventy percent. It is believed that the increase in NRW may be partially attributed to the increased availability of water and greater water pressure, which has resulted in greater amounts of leakage and stolen water. Due to NRW, the concessionaire lost an estimated PHP 36 billion (US $785 million) in revenue within the first five years of operation.

Commentary:

1. Methods for Overcoming Impediments

NRW and an additional 1,500 kilometers of pipe were not Maynilad's only problems. From mid-1997 to mid-1998 El Niño effects reduced Manila's bulk water supply by forty percent. This affected the amount of water that Maynilad could provide to its customers, further reducing revenue. When the Asian economic crisis hit in 1997, Maynilad was already saddled with US $720 million of MWSS's foreign debt. At that time, international aid for water infrastructure was on the decline worldwide. The concessionaire was forced to rely on foreign financing, which heightened its foreign-exchange risks. The Asian crisis devalued the Philippines peso from 26.30 to US $1 in 1997 to PHP 55 to US $1 in 2000. Because MWSS's debt was being repaid to foreign lenders, the change in exchange-rate value lead to an increase in the concession fees Maynilad owed MWSS.

By 2001 Maynilad's debts reached PHP 14 billion (US $300 million). That same year the company was operating at an annual net loss of PHP 1.1 billion (US $24 million). Maynilad was forced to stop paying concession fees in March 2001 because it had run out of funds. Additionally, it requested that MWSS initiate a price increase for service. In December 2002, one of the consortium's partners filed for an early termination of its concession agreement with an arbitration court. The partner claimed that MWSS committed breaches of its obligations under the concession agreement as the basis for early termination. Specifically, they argued that bidders for the West Zone had bid with the understanding that an additional three-hundred million liters a day of bulk water would be available by the end of 1999 through the Laguna Lake water supply project at no cost to the winning concessionaire. In 2001, the National Economic and Development Authority cancelled the much-delayed project because of high cost and environmental factors. There were five other vital concession projects that MWSS also failed to complete. The petition argued that MWSS's inability to meet its obligations under the concession agreement prevented the concessionaire from performing its obligations and left the company in heavy financial debt. Additionally, Maynilad alleged that MWSS failed to conduct a fair and objective rate rebasing exercise in October 2002 when it did not consider the viability of the concession. Maynilad assumed the agreement was officially terminated in February 2003 and the consortium requested US $303 million in compensation for its investments.

However, MWSS insisted that Maynilad had no right to terminate the concession agreement, and instead, filed its own petition to terminate the contract. To support its claim, MWSS maintained that the concessionaire stopped paying concession fees, failed to reduce NRW, and breached the concession agreement when it failed to maintain the BNAQ-5 aqueduct, construct BNAQ-6 aqueduct and infuse US $80 million in equity. In its defense and counterclaim, Maynilad denied that it was contractually obligated to reduce NRW or to invest an additional US $80 million in equity. The company further claimed that it had in fact performed its obligation to maintain and repair the BNAQ-5 aqueduct and that it was under no obligation to construct BNAQ-6 since the need for the construction of the aqueduct was due to the poor construction of BNAQ-5, which was the responsibility of MWSS. Maynilad admitted to withholding concession fees, but claimed it was because of the contract breaches committed by MWSS. MWSS argued that the rate increase granted during the October 2002 rebasing period should have provided the company with additional revenue and the ability to recommence concession payments. They also chastised Maynilad for overestimating revenues, underestimating costs and failing to cushion itself for some fall in the dollar-peso exchange rates.

In November 2003 the arbitration panel decided that neither MWSS nor Maynilad could terminate the concession agreement. The panel ruled that since it had no role in the contract negotiating process, and neither the bulk water supply projects nor service target adjustments were included in the contract, they could not rule in favor of the concessionaire. As to the rate rebasing process, the arbitration panel agreed with the company that there was a mistake in MWSS's interpretation of the phrase "cash flows" which led to an erroneous disallowance of a substantial amount that Maynilad should have been allowed to recover. In regard to MWSS's claims, the panel found that Maynilad could not be held to be in breach of its obligations with respect to the BNAQ-5 aqueduct, that they were under no obligation to provide US $80 million in funding support and that the NRW problem could not be characterized as mismanagement or breach of the concession. However, the panel did order Maynilad to pay all delinquent fees (including interest) owed to MWSS. The arbitration panel also authorized MWSS to draw on the performance bond, should the company fail to remit its concession fees within fifteen days. The panel stated that the parties undoubtedly have problems in their internal relations but they have to find extrajudicial solutions to them.

Since 2003 Maynilad has continued to provide water to the West Zone "to the extent necessary to serve the public interest." However, this continuation of service by Maynilad has come at a huge cost to consumers. From 1997 to 2004 water rates increased by two hundred and seventy-five percent. Even with the increased revenue generated by higher customer tariffs, Maynilad has not paid concession fees since 2001. Because of Maynilad's refusal to pay concession fees, the government has been incurring new loans to avoid defaulting on MWSS's maturing loans, which remain in the government's name. Moreover, MWSS had to spend PHP 230 million (US $5 million) for the legal services that it employed during the early termination dispute. Since 2004 MWSS and Maynilad have discussed a plan for the quasi-reorganization of the concession that ensures settlement of all outstanding concession fees owed to MWSS and continuous service provision of water consumers through a financially healthier Maynilad. The plan calls for the write-off of the shareholder equity of, and receivables due to shareholders to cover accumulated losses; a partial conversion of debt-to-equity; debt restructuring; and a partial draw against the performance bond. Most recently, this deal has been shrouded in allegations of corruption between government officials and powerful local interests.

In 2007, Maynilad went through a change in ownership when a new consortium acquired a majority of the company's shares. The new owner made great strides in the financial and operational health of Maynilad. Under the new management, the company's outstanding debts, which had reached $240 million, were paid off with one year. As of September of 2009, around P13 billion has been spent in the last two years and another P7 billion is budgeted for 2009 to improve the water and wastewater system. An aggressive plan was also implemented to increase company revenue, improve water service operations, and cut commercial losses. Over the 10 year period under the previously ownership, the company invested only about P8 billion over that time period.

2. Key Points for Success or Failure

Although a number of objectives were met, such as expanding services to all sectors of the population, there are obviously serious and ongoing problems with the agreement between the public and private sectors, despite recent improvements.

One problem was the transfer of all financial risks to the private sector. While both parties agreed to this arrangement, subsequent events clearly indicate that there should have been a means for risk-sharing, e.g., a means to allocation the risk of currency fluctuation. Furthermore, the disproportionate allocation of the public debt, with ninety percent of the load on the West Zone concessionaire, added to this problem. Knowing that the government's debt was financed in foreign currency, the two sectors should have been able to work together to soften the blow of the Asian financial crisis.

An all too common problem encountered in public-private partnerships is inaccurate inventory of pre-agreement infrastructure. The contract should have included some provision to address the post-signing finding that there were 4,000 kilometers of existing pipe lines instead of 2,500 kilometers. Even though it was pre-concession infrastructure that was faulty, full financial burden had already been transferred to the concessionaire. Without a means to rectify this discrepancy, the financial problem caused by NRW was drastically magnified. Additionally, the government did not provide any support for the enforcement of illegal tap closures.

Another underlying problem was the lack of a true working relationship between the public and private sectors. A public-private partnership requires a mutual understanding of each partner's capabilities and limitations, both politically and financially. In this case, there appears to have been a number of assumptions about the other's ability to meet certain responsibilities, but there was not a clear and open dialogue on how to address challenges as they appeared. Furthermore, while the public sector needs to protect the interests of its constituents, the private company needs the ability to adjust rates to reflect the current market situation. In this concession agreement, MWSS had full control of tariff increases, which hindered Maynilad's ability to respond to changes in the project's financial environment. However, under the mew ownership that took over Maynilad in 2007, there has been a better relationship between the public and private entities. While still too early to tell, it appears the better relationship will lead to improvements in the previous project's shortcomings.

Finally, the government's decision to award contracts based on the lowest bid instead of feasibility hurt the partnership. An IFC report showed that the company's targets for NRW reduction, and therefore revenue generation, were unrealistic, yet Maynilad's bid was accepted by the IFC and MWSS. The inability of the concessionaire to meet predicted targets coupled with the tax breaks granted by the government resulted in less revenue collected by the public sector.

While the concession model can work well in developed economies, it is more challenging in developing economies, especially when large portions of public debt are transferred to the private partner. Part of the problem lies in revenue forecasts, which often prove to be overly optimistic. Simultaneously, unexpected operational challenges (as noted with the inadequate inventory of infrastructure and failure to provide access to additional water sources) can compound the net revenue problems with this form of partnership. For a concession contract to be successful, these sorts of contingencies should be anticipated and addressed by the PPP agreement. However, such contingencies may render an agreement unfeasible for a government with limited financial resources. For this reason, there is increased use of the affermage model, or toward partnerships that are infrastructure development agreements such as Build-Operate-Transfer or Design-Build-Operate partnerships.

While the Manila project cannot be called a success, there are substantial lessons that can be learned from this experience.