

**Master Programme on Sanitary Engineering**  
**(Sector and Utility Management Branch)**

**INDIVIDUAL STUDY REPORT**

**PRIVATE SECTOR PARTICIPATION IN  
DEVELOPING COUNTRIES:  
Comparative Analysis of Three Water Supply  
Concession Contracts**

**(Final Report)**

***Submitted By:***

**PRUDENTE, NARCISO DE ASIS  
Philippines  
Locker Number 207**

***Supervisors:***

**Mr. Okke Braadbaart and  
Mr. Klaas Schwartz**

**Date of Submission : 08 September 1999**

9  
good.  
Let it in in all contracts  
- not out -  
either in, but =  
"D" out to out  
"D" out to out  
initially  
gone  
202.2-15909

---

## Abstract

Development in the water supply, sewerage and sanitation sector, particularly in developing countries, is more focused on Private Sector Participation (PSP). PSP is seen as an important element in accomplishing what most government institutions has failed to do – to provide an efficient, effective, sustainable, equitable, and replicable water supply and sanitation to the people.

Success or failure of PSP depends on how well contractors are selected and contract specifies performance parameters, provides predictable procedures for re-negotiation and workable remedies for non-performance and creates an environment of trust and partnership.

Competition, through competitive bidding process, generates valuable information on the quality of prospective operators, asset values, investment requirements and proper tariff levels.

Performance parameters should be clearly specified in the contract and consistent with the objectives of pursuing PSP. This should be accompanied by a clear security package like performance bonds, and penalties that should be imposed in case of non-compliance of the Concessionaires. Moreover, contracts must be flexible enough to adapt to changing circumstances and needs, by providing clear guidelines for re-negotiation.

There must be a strong regulatory framework. The regulator should be independent to avoid of political risk, reduce contractual uncertainties and provide rules for renegotiating contracts following unforeseen changes in circumstances or adjustments in contract objectives.

With a transparent competitive bidding process and with all the important aspects mentioned above specified clearly in the contract, PSP can lead to substantial benefits in terms of expanded coverage, quality of services, affordable tariffs, and productive efficiency.

LIBRARY IRC  
PO Box 93190, 2509 AD THE HAGUE  
Tel : +31 70 30 689 80  
Fax: +31 70 35 899 64

BARCODE: 15909

LO: 202 2 99 PR

---

# TABLE OF CONTENTS

	Page
<b>Abstract</b>	
<b>I. Introduction</b>	<b>1</b>
<b>II. Sectoral Background of the Three Water Supply Utilities</b>	
<b>A. Manila Water Supply</b>	
1. Background	2
2. Rationale for Privatization	2
<b>B. Jakarta Water Supply</b>	
1. Background	2
2. Rationale for Privatization	3
<b>C. Buenos Aires Water Supply</b>	
1. Background	3
2. Rationale for Privatization	4
<b>III. Concession Contract: Literature Review</b>	<b>5</b>
<b>IV. Concession Contract of the Three Water Supply Utilities</b>	
<b>A. Manila Concession</b>	
1. Description of the Concession	7
2. Bidding Process	7
3. Obligations of the Concessionaires	8
4. Tariff Structure	8
5. Regulatory Framework	9
<b>B. Jakarta Concession</b>	
1. Description of the Concession	9
2. Bidding Process	9
3. Obligations of the Concessionaires	10
4. Tariff Structure	10
5. Regulatory Framework	10
<b>C. Buenos Aires Concession</b>	
1. Description of the Concession	11
2. Bidding Process	11
3. Obligations of the Concessionaires	12
4. Tariff Structure	12
5. Regulatory Framework	12
<b>V. Comparative Analysis of the Three Concession Contracts</b>	
<b>A. Types of Concession</b>	<b>13</b>
<b>B. Bidding Process</b>	<b>13</b>
<b>C. Obligations of the Concessionaires</b>	<b>14</b>
<b>D. Tariff Structure</b>	<b>15</b>
<b>E. Regulatory Framework</b>	<b>15</b>
<b>F. Risk Allocations</b>	<b>16</b>
<b>VI. Conclusions/Recommendations</b>	<b>17</b>
<b>References</b>	

---

## I. Introduction

In recent years, private sector participation (PSP) has been the trend for the development of the water supply, sewerage and sanitation sector. The entry of the private operators, particularly in the developing countries, was triggered by the public water utilities' failure to provide reliable services due to its inability to operate efficiently and maintain adequately the existing systems. Moreover, the investments for expansion and rehabilitation are very large which is beyond the financial capacity of the public sector.

Generally, the primary objective of involving the private sector in the development of the sector is to expand the water supply and sewerage systems to increase population coverage, to reduce public health hazards and to provide better quality of service. The secondary objective is to ensure higher operating efficiency and to finance the necessary investments without government subsidies or guarantees.

In achieving these objectives, process used in selecting private operators plays a vital role. Equally important is the contractual arrangement being the core of most of the approaches to private sector participation (service and management contracts, leases and concessions). Success or failure of a given approach will ultimately be determined by how well contractors are selected and contract specifies performance parameters, provides predictable procedures for re-negotiation and workable remedies for non-performance and creates an environment of trust and partnership.

In order to determine the most appropriate method of selecting private operators, to gain better understanding on what should be specified in a contract, comparative analysis of three concession contracts has been done in this study report. Concession type of PSP was chosen due to the huge risks at stake, not only on the private operators but also on the public sector as well being the owner of the utility.

Three concession contracts (Manila, Jakarta and Buenos Aires Concessions) were reviewed/analyzed with respect to six equally important aspects: 1) types of concession; 2) bidding process; 3) obligations of the concessionaire; 4) tariff settings; 5) regulatory framework and 6) risk allocation. Analysis was focused on the six aspects since all these have significant impacts in the formulation a concession contract.

The said three concessions were selected as case studies considering that: a) all of the three are urban areas of developing countries; b) all has the same type of PSP (concession contracts) but has different approaches; and c) has common objectives/targets for improvement.

Sectoral background of the three water supply utilities and its rationale for privatization are described in Chapter 2. Chapter 3 gives the literature review of a concession contract. Chapter 4 gives a brief description of the three concessions with regards to: a) description of the concession; b) bidding process; c) obligations of the concessionaire; d) tariff settings; and e) regulatory framework. The comparative analysis of the three concessions was done in Chapter 5. Finally, conclusions and recommendations were made in Chapter 6 based on the result of the comparative analysis.

---

## **II. Sectoral Background of the Three Water Supply Utilities**

### **A. Manila Water Supply**

#### **1. Background**

The Metropolitan Waterworks and Sewerage System (MWSS) of the Philippines is a government-owned water utility organized in 1971 from what used to be Manila's waterworks authority that dates back to 1878. The MWSS is mandated to provide water supply and sewerage services to all 7 cities and 10 municipalities in Metro Manila, 5 municipalities and a city in the province of Cavite and all the 14 municipalities of Rizal Provinces.

As of 1995, MWSS has about 719,878 household connections, 1,698 public taps, 7,976 industrial connections, 47,864 commercial connections and 1,956 institutional connections, which is equivalent to about 67% service coverage. (Source: McIntosh and Yñiguez, 1997: p167)

MWSS produces 2.8 million cubic meter of treated water per day, in which, 97% are coming from surface water (Angat Dam) and the remaining 3% are from groundwater source. The size of the utility's area of responsibility is 2,100 square kilometers.

#### **2. Rationale for Privatization**

Under government management, MWSS failed to provide adequate water supply and sewerage services to the largest urban center in the Philippines. As mentioned above, only 67% of the population were served before privatization, with an average water supply availability of 17 hours/day. Most of the unserved population relies on wells, which threatened depletion of groundwater in the area. Non-revenue water was estimated at 58%, 24% of which is due to illegal connections.

Moreover, out of 3,000 water samples taken in 1995, 84 failed the bacteriological tests proving poor drinking water quality in some area. There were 31,640 complaints received from the consumer on the same year. It is the opinion of the consumer to improve O & M and to have more water and increased pressure. (Source. McIntosh and Yñiguez, 1997: p167)

Because of these poor services, low productivity, and the desire to end government subsidies (19% national government grant/equity as of 1995) to its operation, the Philippine Government decided to privatize MWSS.

### **B. Jakarta Water Supply**

#### **1. Background**

The PDAM DKI (Pam Jaya) is a government corporation set up in 1977, which is responsible for the water supply and sewerage services in Jakarta. Pam Jaya buys treated water from PDAM Bogor and PDAM Tangerang. Billing and collection services are contracted out to private sector. The government maintains control over staff salaries, tariffs, appointment of top management, and budgets for operation and maintenance and development. Pam Jaya also provides water to slum areas through public taps.

### *Sectoral Background of the Three Water Supply Utilities*

The utility has a partly developed management information system (MIS). Its billing, accounting, and pumping and treatment systems are computerized. On the financial side, out of its total investment funds, Pam Jaya has 76% government loans, 15.5% internally generated reserves and 7.8% national government grant.

As of 1995, Pam Jaya has 312,168 house connections, 2,023 public taps, 945 industrial connections, 42,784 commercial connections and 4504 connections for institutions, which served 27% of the total population of 9,116,000 in the service area (Source: McIntosh and Yñiguez, 1997).

## **2. Rationale for Privatization**

The mission of Pam Jaya is to “provide drinking water for all people in Jakarta”. However, this mission was very far to reality as Pam Jaya was saddled by a very low coverage of 27% (as of 1995) reflecting severe constraints on water resources. Water availability is also low at 18 hours per day. Unaccounted-for-water (UFW) was also very high at 53%. The high average tariff of US\$ 0.61/m<sup>3</sup> contributes to the relatively low consumption figure of 135 l/c/d.

Furthermore, only 25% of consumers benefit from a 24-hour supply. Pam Jaya was also received about 17,480 consumer complaints in 1995. The consumers felt that there’s a need for an improved and stable supply of water, proper maintenance and timely billing. In addition, out of 720 water samples, 210 failed the bacteriological tests, meaning about 29% of the consumers may have experienced from poor drinking water quality. The Government sees reduction of unaccounted-for-water and increase in total production capacity as the its priority needs. (Source: McIntosh and Yñiguez, 1997:p125).

President Suharto decided to pursue privatization of Pam Jaya. However, these poor performances and priority needs mentioned above are only minor portion of his intentions. It is deemed that his motive is more politically motivated, as it is no coincidence that his eldest son sits on the Board of one of the two concessionaires in the Jakarta water supply concession.

*Presently*

## **C. Buenos Aires Water Supply**

### **1. Background**

In 1912, Obras Sanitarias de la Nacion (OSN) - a national public company - was established to be in-charge of water supply and sewerage for the entire country. In 1980, a major reform to decentralize the sector took place, whereby the provincial governments took over from the federal government responsibility for local water supply and sewerage services, and OSN remained in-charge of Buenos Aires only.

The Greater Buenos Aires is comprised of the city of Buenos Aires –the federal capital – plus thirteen municipalities surrounding the capital and belonging to the province of Buenos Aires (first-belt municipalities), which are connected to the same water supply and sewerage systems. The total population of Greater Buenos Aires was 8.6 million in 1991, of which, only some 6 million (70%) and 5 million (58%) were connected to the public water supply and sewerage systems, respectively.

Prior to privatization, OSN administered about 1.2 million water connections and almost 1 million sewerage connections. Its yearly billing amounted to some \$300 million. (Source: Idelovitch and Ringskog, 1995: p28)

## **2. Rationale for Privatization**

The operation of the Greater Buenos Aires system by OSN was characterized through the years by a series of problems. Unaccounted-for-water was high at about 45% of the water produced. Water meters were installed at only 20% of the connections. There was no regular meter reading, and billing was not based on actual consumption. Water demand was very high at 400-500 l/c/d, which is double the norm for metered and well-managed water supply systems.

OSN also had a serious problem of excess personnel, with a ratio of 8-9 employees per 1000 connections compared to a ratio of 2-3 for an efficient water company. In addition, the company was plagued by a series of political appointments and extensive political intervention.

The decision of the central government to privatized OSN was based on the recognition that: 1) huge investments were required for rehabilitating and expanding the water and sewerage systems; and 2) the performance of OSN continued to be poor despite various attempts to improve it. (Source: Idelovitch and Ringskog, 1995: p29)

---

### III. Concession Contract: Literature Review

In a “concession”, the concessionaire takes over the responsibility for the services, which include, operating, maintenance, management, and capital investments for the expansion of the existing system. However, ownership of the fixed assets remain on the government or the public authority, but these fixed assets are entrusted to the concessionaire for the duration of the concession contract and must be returned in the same condition at the end of the concession period.

Concession contracts are likely to be in a longer period (20 to 30 years), particularly where the concessionaire is required to finance a large capital investment program. Consequently, there can be a significant lead time to the introduction of concessions, usually up to two years, and this period typically involves significant activity in documenting existing service facilities and arrangements, to ensure that risks are comprehensively identified and addressed. Contracts are normally let through competitive tender, although there are some examples of negotiated contracts, such as those in Jakarta

The system of regulation is also important in these larger concession arrangements because of the potential risks to the concessionaire, and it is important that the regulatory system and the performance objectives, on which it is based, are clearly identified in the concession contract. Moreover, certain risks would normally be identified and dealt within the contract, particularly those political risks, which are outside the control of the concessionaire.

The main reasons for entering into contracts are to:

- Access technical skills which are not available from existing staff
- Introduce private sector management expertise
- Avoid public sector employment rules
- Introduce efficiency improvements (maximized by competitive tendering)
- Increase the focus on service standards
- Increase the financial input of the private sector, to cover working capital and investment costs related to maintaining and improving the system.

The considerations and the process for entering into such contracts are more extensive, reflecting the more complex relationships involved, the potential vulnerability on both sides, and the long-term nature of the contract. Typically, the process will include:

- (i) government review of:
  - institutional framework, including legislative constraints
  - utility finances
  - existing infrastructure
  - future service standards required, and phasing
  - technical and financial impact of new standards;
- (ii) government decision on PSP strategy, including:
  - nature of concession arrangements
  - allocation of residual debt costs
  - extent of government financial support and guarantees
  - in some cases, continued access to loans from international lending agencies, where this is appropriate and available
  - range of acceptable tariffs
  - legal and financial commitments by government itself
  - process for bidding and award of contracts (including any requirement for separate technical submissions and rate bids)



- arrangements for subsequent contract supervision and regulation; and
- (iii) preparation by the utility of:
- documentation for interested parties (including relevant data)
  - contract documentation
  - procedures for (neutral) support to potential bidders' feasibility studies
  - invitations for expressions of interest
  - invitations for pre-qualification of bidders
  - tender documents (including draft contracts)
  - Management of the selection and award process by government and utility (preferably involving independent third parties in a monitoring role).

(Source: McIntosh and Yñiguez, 1995, p24-25)

---

## IV. Concession Contract of the Three Water Supply Utilities

### A. Manila Concession

#### 1. Description of the Concession

The MWSS privatization, which was completed in August 1, 1997, is a *25-year concession period* transferring the overall responsibility for the operation, maintenance and investments in the water and sewerage system to two consortia. *The MWSS service area is unbundled into two, the West and East Zones.* The West Zone accounts for about 60% of the population and of the water connections in the service area and is also more densely populated. (David, 1998 : p8)

The two consortia are the *Manila Water Company, Inc (MWCI)* and the *Maynilad Water Services, Inc (MWSI)*. MWCI is a joint venture of Ayala Corporation of the Philippines, United Utilities of the U.K. and the U.S.-based Bechtel Corporation. MWSI is a consortium composed of the Philippine industrial group, Benpres Holdings Corp. and the French company, Lyonnaise des Eaux. MWCI and MWSI were the winning bidders during the auction arranged by MWSS on January 27, 1997. Under the arrangement, MWCI will be responsible for the management and development of the water system in the eastern part of the city, and MWSI in the western part.

*The residual MWSS, together with its Board of Trustees, are retained to:* 1) facilitate the exercise by the Concessionaire of its agency powers; 2) carry out accounting and notification functions; 3) monitor, report and administer the MWSS loans and performing related functions in connection with the existing projects; 4) provide other services or functions as assigned by the Concession Agreement or the Regulatory Office; 5) manage and/or dispose the retained assets; and manage and operate the Umiray-Angat Transbasin Project (UATP), new water source diverting raw water from Umiray River to Angat River. (Source: Concession Agreement, 1997: p38-39)

A *Regulatory Office (RO)* was also established, in which, the functions are discussed in the later part of this section.

#### 2. Bidding Process

Selection of operators was done through competitive bidding. Based on pre-qualification criteria, four companies were short-listed. These companies were required to bid for both Zones. The first step is the submission of the technical bids. After the technical bids were evaluated (in which all the four companies passed), the second and final step was the submission of financial bids (for those who passed the technical evaluation) expressed in terms of the percentage of current average tariffs to which the concessionaire would reduce water tariffs.

MWCI's financial bids for both Zones are the lowest bids. The bids for tariffs are only about 30% of the existing tariffs at the time of bidding. However, the rule is one bidder can win only one concession. This rule will create comparative competition among the winning concessionaires of the two service areas. And this makes way for the MWSI to win the West Zone with the second lowest bid at ₱4.96 (about \$0.13) per m<sup>3</sup>. MWCI got the East Zone since its bid for that service area is the lowest at ₱ 2.32 (about \$0.06) per m<sup>3</sup>. (Source: David, 1998: p17)

### **3. Obligations of the Concessionaires**

With respect to service obligations, the concessionaires are required to *render water supply services to all existing customers in the service area, and increase service coverage as stipulated in the Concession Agreements*. Furthermore, the concessionaires are required to provide data and supporting evidence to the RO that demonstrates compliance with such coverage targets

With regards to the continuity of supply, the concessionaires *should ensure an uninterrupted 24-hour supply of water to all connections as soon as practicable, but in any event not later than the 30<sup>th</sup> of June, in the year 2000. An adequate supply of water for fire-fighting should also be provided*. The concessionaires will not assess a charge for such water used for fire-fighting purposes but may charge for all other water used for public purposes

For sewerage, the concessionaires should *offer to supply sewerage services to all customers who have sewerage connections for domestic sewage and industrial effluents compatible with available treatment processes*. The concessionaires should make such a connection as soon as reasonably practicable upon the request of the people

The concessionaires should also *ensure at all times that the water supplied to customers in the service area complies with Philippine National Drinking Water Standards as published by the Department of Health of the Republic (or successor entity responsible for such standards)*. Moreover, *the concessionaires should comply with all national and local environmental laws and standards relating to treated wastewater in the service area*

In terms of financial obligations, *each of the local and international partners is required to maintain an equity share of 20% for the first five years and 10% thereafter*

*A performance bond of \$120 million for the west zone and \$70 million for the east zone must be maintained during the initial 10 years, after which, the performance bond decline for each successive rebasing date*

In addition, *concession fees should be paid by the concessionaires to cover the amortization payments of the local and foreign debts of the MWSS (90% by MWSI and 10% by MWCI) and the costs of operation of the residual MWSS and the RO* (Source: Concession Agreement, 1997 p18-28)

### **4. Tariff Structure**

*The average tariffs were initially set based on the bid price, expressed as the percentage of the current average tariff to which the concessionaires will reduce tariffs (about 30% for the East Zone and about 50% for the West Zone)*. Moreover, the concessionaires may apply a CERA (Currency Exchange Rate Adjustment) charge of ₱1 per cu m (about \$0.026 per cu m) of water consumed and collect a connection charge for water or sewer connection not to exceed ₱3,000 (about \$79 and adjusted for inflation) for distances of less than 25 meters between the connection point and the customer and at a reasonable cost for customers further away

The Agreement also provides for water tariff rate adjustments from time to time, subject to the MWSS' Charter limitation on its *rate of return*, which is equal to 12% of the book value of its assets

There are three bases for rate adjustment: inflation, extraordinary circumstances, and rebasing. *Inflationary factors* are explicitly allowed for water tariffs (including connection fees) by the fact that bidders were made to assume that inflation rate is zero over the life of the concessions. Grounds for *extraordinary price adjustments* includes: 1) amendment in the service obligations, 2) changes in the law and other government regulations that affect cash flows, 3) avilment of below market interest rate financing from any multilateral or bilateral sources, 4) movements in the exchange rate above 2%, 5) erroneous bidding assumptions provided by MWSS prior to the bid, 6) increases in the concession fees, 7) delays in the completion of the UATP, and 8) increases in the operational cost as a result of an uninsured Event of Force Majeure. The latter includes among others, war, volcanic eruption, unusually severe weather conditions, prolonged strikes, and any other events beyond the reasonable control of the Concessionaires. Inflation and extraordinary circumstances may be allowed as grounds for price adjustment any time after the first year, while *rebasing* follows a five-year cycle. (Source: David, 1998 p15)

## 5. Regulatory Framework

A *Regulatory Office (RO)* is established to monitor and to enforce compliance by the concessionaires of the contractual obligations under the concession agreement, implement rate adjustments, arrange for public dissemination of relevant information, respond to complaints against concessionaires, and prosecute or defend proceedings before the Appeals Panel. The *Appeal Panel* consists of two members (one each to be appointed by the Concessionaires/MWSS and the RO) and a chairman (to be appointed by the President of the Chamber of Commerce). There are about 60 employees in the RO, headed by a Chief Regulator and four regulators corresponding to technical, financial, customer service and administration and legal matters. (Source: David, 1998)

## B. Jakarta Concession

### 1. Description of the Concession

In 1997, the provision of water services in Jakarta were out contracted to *two concessionaires* led by two local private firms, the *Kekarpola Airindo* and the *Garuda Dipta Semesta* for a *period of 25 years*. *Kekarpola Airindo*, which will serve the Eastern part of Jakarta, is in joint venture with *Thames Water Overseas*, an England-based Company and a wholly-owned subsidiary of *Thames Water International Services Holdings Limited*. On the other hand, *Garuda Dipta* has joined forces with *Lyonnaise des Eaux* of France to serve the Western part. (Source: Braadbaart, 1999 p8)

### 2. Bidding Process

No bidding process occurred in selecting the concessionaires. What happened is a negotiated contract. Then President Suharto gave instruction to Pam Jaya to sub-contract water services provision to the two local firms mentioned above.

Politics played a major role in this process of public-private partnership for the Jakarta Special Territory, considering that the eldest son of Suharto is a member of the Board of *Garuda Dipta Semesta*. While *Kekarpola Airindo* is a subsidiary of *Salim Group*, a conglomerate led by Suharto's associate *Liem Sioe Liong*. The negotiation did not proceed smoothly, as it took about two years before concession agreement was signed in 1997 due to the strong objections from Pam Jaya. But the objection was only good enough to delay the negotiation process, and still, its effort did not stop Suharto from forcing the concession. (Source: Braadbaart, 1999 p8)

### **3. Obligations of the Concessionaires**

Per the Cooperation (concession) Agreement, the obligations of the concessionaires are as follows

- 1) arrange all necessary funding for the project,
- 2) meet the technical targets and the service standards,
- 3) procure all supplies of raw water and bulk treated water,
- 4) submit performance reports to Pam Jaya, being the regulatory body,
- 5) cooperate in the common use of the assets,
- 6) prepare the Five-Year Programs, and
- 7) transfer know-how and technology relevant to the project to Pam Jaya

Technical/coverage targets includes *reduction in UFW down to 35% and increase in service coverage up to 70% after five years and then up to 100% at the end of the contract* Service standards are based on local standards *Water production capacity and volumes of water billed should also increase* (Source Braadbaart, 1999 p11)

### **4. Tariff Structure**

Pam Jaya has the sole responsibility for setting the level of tariff. The tariff is sufficient to pay Pam Jaya's primary requirement and the concessionaires' revenue share for each year during the term. The existing tariff at the date of signing the concession agreement was applied until the end of 1997. The first tariff adjustment was effected at the beginning of 1998.

Subject to the approval of the Government of DKI Jakarta (the Special Region of Capital City of Jakarta), further adjustments of the tariff may be made on the commencement of each semester during the term, in accordance with index formula determined by Pam Jaya. However, if the tariff determined by the Government of DKI Jakarta is not enough to pay Pam Jaya's primary requirement and the concessionaires' revenue share, the technical targets, service standards and other relevant obligations of the concessionaires will be adjusted (Source Concession Agreement, 1997)

### **5. Regulatory Framework**

Per the Cooperation (concession) Agreement, the Board of Supervisors of Pam Jaya shall have an authority as the "Regulatory Body" with the functions and powers set out in the concession agreement, including without limitation, the following

- Arranging coordination among the relevant Government Authorities in relation to the implementation of the Agreement,
- Monitoring of the implementation of the Agreement,
- Monitoring the provision of water to customer,
- Monitoring enforcement of closure of deep wells,
- Monitoring tariff rates in each tariff band and estimating average tariffs for all customers and for subsidized customers,
- Monitoring the performance of Pam Jaya's rights, being the owner of the utilities, with respect to design and construction under the Agreement,
- Developing and establishing clear and equitable mechanisms acceptable to the concessionaire for settlement of disputes with customers with respect to the provision of customer services, and

- Any other functions as provided for in the Procedure of Performance, Monitoring and Evaluation System Agreement

## **C. Buenos Aires Concession**

### **1. Description of the Concession**

A 30-year concession contract was awarded to the winning bidder – the *Aguas Argentinas* – on May 1, 1993 and took over water supply and sewerage operations from OSN. *Aguas Argentinas* is an international consortium led by *Lyonnaise des Eaux* and comprised of three local investors and four international operators (including *Lyonnaise des Eaux*). *Lyonnaise des Eaux* is the company's major shareholder, and holder of the company's operating contract. As the operator and manager, *Lyonnaise* is compensated through an annual management fee related to *Aguas Argentina*'s gross profits, and is required to hold at least 25% of the concessionaire's total capital, which must be at least \$120 million. Of the company's share capital, 10% is reserved for employees of the company, as required by law, and the founding consortium members are required to hold at least 51% of the company's shares. A key factor in facilitating privatization was the support of OSN's employees and many employees' acceptance of the voluntary early retirement program.

### **2. Bidding Process**

Selection procedure is through *international competitive tender*. The process ensures that bidders had the technical expertise and financial capability to undertake the concession. In addition to water supply and sewerage experience for an urban population of about 10 million customers and \$600 million in annual billings, bidders were required to have a net worth at least \$750 million and ability to incur debt of at least \$2 billion.

All five consortia that submitted pre-qualification documents (two of which combined) were pre-qualified. Participation in the tender was expensive. Each consortia spent an estimated \$2 to \$3 million preparing detailed technical proposals and development plans, and each bid was accompanied by a \$3 million security deposit that was returned after the contract was signed.

A *two-envelope process* was used to award the contract. The first envelope is the technical proposal indicating how a bidder's investment plan would accomplish the government's objectives of rehabilitating all systems, improving drinking water quality, reducing unaccounted-for-water, increasing water pressure and collecting and treating sewage. One of the four consortia was disqualified at this stage because its investment plan was judged unrealistic.

The second envelope (financial bids) were formulated on the assumption that the tariff level would remain unchanged in real terms over the concession's 30-year life. Financial bids had to include detailed financial projections and a clear representation that the proposed tariff supported the investment plan. When bids were opened, all three bidders proposed coefficients that were less than one, indicating that tariffs would be set below the existing level. The lowest coefficient – offered by the winning consortium, *Aguas Argentinas* – was 0.731, just below the 0.739 coefficient offered by *Aguas de Buenos Aires*. (Source: Haarmeyer and Mody, 1998, p130)

### **3. Obligations of the Concessionaires**

The main obligations of the Aguas Argentinas are to provide 100% water supply service coverage and to reduce UfW from 43% to 25% at the end of the concession period. The concession includes operation and maintenance of the water supply and sewerage systems in the service area of the OSN, rehabilitation of existing facilities, and gradual expansion and upgrading of service in the same area. In the future, the concession could also be extended to areas presently serviced by others, by mutual agreement of the concessionaire and the regulatory authority.

The concessionaire shall also provide a massive investment program. Although not mentioned in the Concession Agreement, it is assumed that the investment needed is estimated to be about \$4.0 billion for both water supply and sewerage improvements. The concessionaire is also required to post a \$150 million performance bond to cover the first five-year period.

The contract also stipulated that the quality of service required (water pressure, continuity of supply and water quality) as well as the maximum acceptable levels of various contaminants shall meet the standards based on national and international standards, as well as, on historic data collected by OSN. The quality requirements for both potable water and sewage effluents were set to tighten gradually every five years (1993, 1998 and 2003).

The concessionaire shall also assure that metering of consumption and the application of the corresponding rates based on consumption will be applied for non-residential consumers and for bulk water sales, within a period of two years. For residential consumers, metering is optional, at the discretion of either the consumer or the concessionaire. Other obligation is to reduce employees from 7,600 to 4,000 (Source: McIntosh and Yñiguez, 1995 p29).

### **4. Tariff Structure**

Tariff was set as bid, which is lower by 27% from the rate at the time of bidding. Revisions of water rate are differentiated between "ordinary" and "extraordinary". The only "ordinary" revision permitted in the first five years is rate reductions. Afterwards, five-year tariffs can be raised only if there is a change in investment goals. "Extraordinary" increases can occur when the cost index changes by more than 7% or if there are changes in regulations or fundamental conditions in the concession. Tariff adjustment would occur in the event of a change in the parity of the Argentine peso to the US dollar (Source: Haarmeyer and Mody, 1998 p131-132).

### **5. Regulatory Framework**

An independent tripartite (municipal, provincial and federal) regulatory body (ETOSS) was established, with responsibilities of monitoring compliance in terms of tariffs charged to customers, progress with the investment programme and quality of water supplied. With an annual budget of \$12 million, funded by a 2.7% surcharge on tariffs collected by the concessionaire, ETOSS is meant to be a self-sustaining agency. Several agencies are represented in the Regulatory Body, directly or indirectly, including ETOSS, the Public Works Secretariat, Ente Nacional de Obras Hidricas de Saneamiento, the Secretariat of Natural Resources and Human Environment and Provincial Public Works ministries and secretariats. A new Secretariat for Environment and Natural Resources was established to set national policy goals and enforce certain environmental standards, such as those for industrial water pollution (Source: Haarmeyer and Mody, 1998 p128).

---

## V. Comparative Analysis of the Three Concessions

### A. Types of Concession

Unbundling of services can be an advantage, as it diminished monopoly and provides competition in terms of comparing two or more concessions. This can also help in motivating the Concessionaires to perform well, specially, if the contract stipulates negotiation for contract renewal or extension after the concession period. But, unbundling of services is not applicable in all situations. Careful analysis should be done on the possible problems and impacts that unbundling can do.

Like in the case of MWSS, the division into two concessions surely avoided monopoly and created comparative competition. However, the unbundling of service areas has also created a problem as both concessionaires are sharing one water source. Once the supply from the source is not sufficient to meet the demand, this will trigger problems for the RO once the two concessionaires have disagreements regarding the sharing of the resources.

In Buenos Aires, dividing the service area was also considered, but recognizing the constraints of having a joint source of treated water and the big discrepancy in terms of income level between the proposed two areas, the idea was rejected.

In Jakarta, unbundling of services into two, can be advantageous as bulk water are being bought from a third party, so no problem in source allocation. The only unclarity is the discrepancy in terms of income level.

### B. Bidding Process

Both Manila and Buenos Aires Concessions passed through competitive bidding. The process is transparent enough to assessed the value of the existing assets of both public utilities and evaluate the technical and financial competitiveness of the bidders.

However, considering that the deciding factor is the lowest bid price, bid can go very low in order to win the contract, which may be unrealistic to meet the performance targets or service obligations of the concessionaires. And this is what happened to the Manila concessions. The MWCI's bid is only about 30% of the rates prior to privatization. With this low bid, it is possible that there are some aspects that has been overlooked or MWCI might have some strategies in mind on how to increase the price later on even before the rebasing period.

Now the MWSS Concessionaires make their move and requested an increase in water rates in the form of the Extra Ordinary Price Adjustment (EPA). The justifications for the request are 1) El Niño phenomenon, 2) Peso devaluation (for payments of loan inherited from MWSS), 3) increase in salaries, and 4) change in Government Rules/Orders. Only the first two justifications were acceptable to the RO. The MWCI was awarded an increase of ₱0.29 (from ₱2.32 to ₱2.61) while MWSI's price is adjusted by ₱0.84 (from ₱4.96 to ₱5.80). The MWSI accepted the adjustment without dispute but the MWCI is appealing for an additional ₱0.51 increase. The case is still ongoing at the Appeal Panel. By just looking at the numbers, the MWSI has the reason not to be happy with the decision of the RO. MWSI received higher adjustment since they are paying 90% of the inherited loans from MWSS. The competitiveness of both the Regulatory Body and the Appeal Panel will be tested in this kind of situation.

In the Buenos Aires bidding process, the conditions for pre-qualification is very strict. The bidders are required to have extensive experience in water and sanitation and should be highly financially



stable (should have an annual billings of \$600 million, a net worth of \$750 million and can incur debt of at least \$2 billion) Although this is advantageous for Buenos Aires, these criteria prevented the smaller qualified companies from participating in the tender and giving way only to the bigger companies, which prevented the potential of smaller qualified companies from growing and creates less competition as competitors are limited to big companies only

Jakarta concession, on the other hand, is the opposite of the Manila and Buenos Aires concessions, as no bidding process happened. The contracts are negotiated and acquired by the concessionaires through the directives of the then President Suharto. The negotiated contracts are much prone to performance failure as there's no selection of possible competent bidders. The results are the tariff has not decrease, no assessment of the condition of existing assets, and minimal project risks on the part of the concessionaires. The concessionaires got most of the benefits out of these concessions. The negotiation is clearly politically motivated.

Competitive bidding process is an efficient mechanism as it is open, transparent and creates competition in the sector. It gives information about the value of the assets of the utilities and. However, it is deemed necessary to review how the bid price was set before considering lowest bid. One option is for the concern public utility to come up with its own estimates considering performance targets and other related parameters and use this as a basis in determining if the bids are realistic or not. The concern public utility can also hire independent consultants to do the estimates. The later one is more credible but entails additional cost.

The only advantage of the negotiated contracts over competitive bidding process is cost and time spent, as competitive bidding process is a costly process and takes time before commencement of the concession. However, this advantage is negligible compared to the benefits that all parties (including consumers) can get if contracts are competitively bid.

### **C. Obligations of the Concessionaires**

In general, the targets, particularly the end-of-contract technical targets, are specified clearly in all of the three concession contracts. The service obligations of both the Manila and the Buenos Aires concessionaires emphasized clearly a substantial increase in coverage (water supply and sewerage), uninterrupted water supply services, reduction in non-revenue water, and reduction in operational cost (due to employee reduction). Moreover, with the regulated tariff structure, meeting the target coverage may not be a problem.

In Jakarta, service obligations are limited only to increase in service coverage, meeting local water standards and reduction in non-revenue water. It is not clear whether the concessionaires are obligated to ensure 24-hour supply and no figurative target for the volume of billed water. This means that the concessionaires are under a moral obligation only in these aspects, and beside, there is no penalty and reward system. Moreover, the high and unregulated tariff may create some problem in achieving service coverage targets, as well as in reducing non-revenue water. Further, the non-reduction in number of employee in Jakarta concession means high operation cost and less efficiency.

In terms of financial obligations, the amount of investments committed by the concessionaires will ease out the financial burden from all the three Governments for future expansion. In case of Manila, not only for future expansion but also for the payments of existing loans. The obligation of all the concessionaires for the three subject areas of providing performance bonds will motivate them to meet their targets as specified in the contracts.

## **D. Tariff Structure**

For Manila and Buenos Aires, tariffs were set competitively. The competitive bidding process gives way for a big reduction in water tariff for both the Manila and the Buenos Aires concessions as the lowest price bid is the determining factor for the winning bidders. In contrast, tariff was set on a non-competitive basis in Jakarta, leading to non-reduction of water tariff.

The low prices for Manila and Buenos Aires are beneficial for the users as they can more afford to pay for the bills. However, this may lead to possible increase in consumption of each household. The very low bids give a puzzle on how the concessionaires can achieve its targets considering the huge investments and operation and maintenance involves. The regulatory bodies of both concessions should expect a series of request for tariff adjustments from the Concessionaires.

Tariff adjustments are allowed yearly but subject to the consistency with the Concession Agreements. There are several types of grounds for tariff adjustment, especially for Manila Concessions. The regulatory body should be competent enough in deciding for the approval or disapproval of the necessary adjustments that can be requested by the concessionaires.

The advantage of Buenos Aires Concessions in terms of tariff structure is the application of the price-cap mechanism, as it provides incentives because the prices allowed for the Concessionaires to charge do not hinge on the cost incurred. Moreover, this motivates the Concessionaires to use their superior knowledge of operating conditions to lower costs and introduce new services.

On the other hand, the rate-of-return mechanism used in Manila Concession guarantee a fair rate of return. However, with a guaranteed cost recovery, the concessionaires have little incentive to minimize cost.

For Jakarta, the tariff setting is also in the hand of the regulator but the procedure is seems to be favorable to the concessionaires. The concessionaires has the luxury of possible profiteering as the tariff prior to the concession is not reduced and enough to earn profits despite of the high percentage of non-revenue water and low service coverage. Moreover, profits is assured even without meeting the targets, as the targets as stipulated in the Cooperation Agreements can be reduced if the tariff adjustments for future years are not sufficient to pay Pam Jaya's primary requirements and the concessionaire's revenue share.

## **E. Regulatory Framework**

In Manila Concessions, the RO is not an independent body since it was established under the jurisdiction of the MWSS Board of Directors. Considering this situation, the decision of the RO is still prone to political interference. The Appeal Panel can be less prone to political disturbance as both parties (the concessionaires and the RO) have equal representations in the Panel, with both parties designate one member each for the Appeal Panel and the chairman is an independent figure appointed by the Chamber of Commerce.

The regulatory framework for Buenos Aires is found to be more credible as it is an independent body (ETOSS) which can limit political interference, reduce contractual uncertainties and provide rules for renegotiating contracts following unforeseen changes in circumstances or adjustments in contract objectives. Moreover, ETOSS are has equal representation from the central government, municipality of Buenos Aires, and the larger province of Buenos Aires.

In case of Jakarta, the Pam Jaya serves as the regulatory body as stipulated in the Cooperation Agreement. This create biases as Pam Jaya is also a stakeholder. No independent party is involved in the regulatory framework. Most of the responsibilities of Pam Jaya are only monitoring and no

enforcement power No clear idea on which body is responsible in case of disputes between the regulatory body and the operators

Having an independent regulatory body lessened the risk of political interference, provides a fair regulation and has a high assurance that concession agreement is being obeyed

## **F. Risks Allocation**

**Market Risk.** In the cases of Manila and Buenos Aires Concession, the market risks are borne by the concessionaires, but mitigating measures such as, tariff adjustment process, guarantee of payments by government customers, and disconnection for non-payment are clearly specified in the contract Meanwhile, in the Jakarta concession, market risk is also on the concessionaires but risk is high because even though tariffs adjustment process is set, the initial tariff is so high that may lead to high risk on non-paying customer In addition, there is no clear policy on disconnection and it is not clear whether the government customers are also required to pay

**Operation/Technical Risk.** The Manila and Buenos Aires Governments are protected against risk of operation since technical capability of the concessionaires were evaluated during the bidding and besides, concessionaires are required to post a performance bond as guarantees of their operational obligations and to pay penalties if performance standards are not met This leaves the risks to the concessionaires themselves

In the case of the Jakarta Concession, although the concessionaires posted performance bonds, operational risk is still high on the part of the government, as even though the contract specified the targets to be achieved by the concessionaires, it failed to specify penalties in case these targets wouldn't be met Moreover, the technical capability of the concessionaires was not evaluated

**Currency Exchange Risks.** For both the Manila and Buenos Aires, the concessionaires are protected against foreign exchange risk, as tariff adjustment formula are provided in case of significant changes in the Consumer Price Index (CPI) or currency devaluation

In the case of Jakarta, it is deemed that risk is on the government side not only on the exchange rate but also on interest rate fluctuation, cost of raw materials, labor and capital works Moreover, tariff adjustments are based on its sufficiency to meet the concessionaire's revenue share, otherwise the concessionaires has the right to reduce technical targets, service standards and other relevant obligations

**Regulatory and Political Risk.** The creation of an independent regulatory agency (ETOSS) minimized the risk of political interference in the Buenos Aires Concession Although, there is an independent regulatory body, the total disappearance of political intervention relies on the dignity of the persons representing the regulatory agency

In the case of Manila concession, there is still a risk on regulation and political interference on the part of the Government, as the RO is not an independent body The existence of the Appeal Panel might lessen the risk but should have a competent chairman, which is the only pure independent actor in the organization

Meanwhile, the political risk is high, on the part of the Jakarta Government, due to the absence of an independent regulatory body and no clear independent mediator in case of disputes between Pam Jaya (the regulatory body) and the concessionaires This put too much pressure and risk on the regulator, especially that the local counterparts of both concessionaires are relative and friend of a very influential political figure (Suharto)

---

## VI. Conclusions/Recommendations

A key lesson that the three case studies have highlighted, is the value of competition in the selection of private operators. The application of a competitive bidding process, just like in the cases of Manila and Buenos Aires Concessions, prohibited information problems and political intervention associated with the sector. Moreover, tariffs were set favorable to the customers. Unlike in the negotiated contracts (the Jakarta case), political interference is severe and contracts were made without considering the quality and capability of the operators and without knowing the value of assets that the concessionaires are tasked to take over. Competition, especially in countries with relatively weak regulatory capacity, is critical in generating valuable information on the quality (technical and financial capabilities) of prospective operators, asset values and investment requirements and proper tariff levels

In terms of obligations, it is important that all targets are clearly specified in the contract and should be consistent with the objectives of the Government of getting into partnership with the private sector. However, this should be accompanied by a clear security package like performance bonds, and penalties that should be imposed in case of non-compliance of the concessionaires in meeting the targets. Targets (both service and financial), bonds and penalties should be as detailed as possible. Unclear security package brings enormous risks to the Government and the luxury of moral obligations to the operators.

Future investment requirements, associated tariff levels, are difficult to predict because of changing environmental quality standards and the difficulty of valuing underground assets. To attract private investments, contracts must be flexible enough to adapt to changing circumstances and needs, by providing clear guidelines for re-negotiation. All the three cases addressed these issues by having a tariff adjustment process, review of tariffs and investment plans every five years or so. However, not all are clearly specified. Like in the case of Jakarta, the loophole is that penalties were not specified

In terms of regulation, strong regulatory framework should be assured so that the flexibility of the contract cannot be abused by the private entity. Furthermore, it should also be independent to get rid of political risk, reduce contractual uncertainties and provide rules for renegotiating contracts following unforeseen changes in circumstances or adjustments in contract objectives. Independence of the regulatory body is very important, particularly in developing countries where governments has weak regulatory capacity and prone to corruption due to insufficient income level. Independent regulator minimizes the risk of political intervention, corruption and can fairly assure that the concession agreement for the benefit of everybody including the consumers.

With a transparent competitive bidding process and with all these equally important aspects mentioned above specified clearly in the contract, PSP can lead to substantial benefits to consumers in terms of expanded coverage, quality of services and affordable tariffs, as well as significant improvements in productive efficiency. However, consolidating these gains and reaping additional benefits in the future will depend heavily on strong leadership and continuous political commitment, as well as the ability of governments, financial institutions and private sectors to implement complementary reforms, especially in the areas of pricing, financing, and regulation.

---

## REFERENCES

1. Braadbaart, Okke (1999), *"Privatization and Market Failure: The Jakarta Water Supply Concession Industry"*, Draft Paper.
2. Braadbaart, Okke (1999), *"Interview With MWSS and the Two Concessionaires"*, Interview Notes.
3. David, Cristina C. (1998), *"MWSS Privatization: Implications on Efficiency, the Poor, and the Environment"*, Draft Paper.
4. Haarmeyer, David and Mody, Ashoka (1998), *"Worldwide Water Privatization: Managing Risks in Water and Sanitation"*.
5. Idelovitch, Emanuel and Ringskog, Klas (1995), *"Private Sector Participation in Water Supply and Sanitation in Latin America"*, The World Bank
6. McIntosh, Arthur C. and Yñiguez, Cesar E. (1997), *"Second Water Utilities Data Book: Asian and Pacific Region"*, Asian Development Bank.
7. Metropolitan Waterworks and Sewerage System (1997), *"Concession Agreement"*.
8. Pam Jaya (1997), *"Cooperation Agreement"*.
9. Rees, Judith A. (1998), *"Regulation and Private Participation in the Water and Sanitation Sector"*.
10. World Bank (1994), *"World Development Report 1994: Infrastructure for Development"*.