

**Asia-Pacific Environmental Innovation Strategies (APEIS)  
Research on Innovative and Strategic Policy Options (RISPO)  
Good Practices Inventory**

**Improving Water Supply Services through Private Sector Participation  
in Cordoba (Argentina)**

**Summary of the Practice**

**Keywords:** Public-private partnership (PPP), water concession contract

**Strategy:** Improving urban environmental services through private sector participation

**Environmental areas:** Urban environment

**Critical instruments:** Organisational arrangements

**Country:** Argentina

**Location:** Cordoba

**Participants:** Province of Cordoba, Aguas Cordobesas (private consortium)

**Duration:** 30-year concession contract was awarded on 21 April 1997 (entry into force May 1997)

**Funding:** Total investment program required in order to reach the coverage target has been estimated at around \$500 million.

***Background:***

Argentina is a federal nation with three levels of government (national, provincial, and municipal). The municipality of Cordoba, the capital of the Province of Cordoba, encompasses the largest area of any major city in Latin America. It is 24 sq. km and supports the second biggest population in the country at 1,339,164 people (in 1999). The annual budget is U.S.\$79 million with per capita expenditure of \$59. Water supply in the city of Cordoba is a provincial responsibility, while sanitation is the responsibility of the municipality. According to the 1923 Constitution, water supply throughout Argentina was a municipal service but later this responsibility was transferred to a federal entity (OSN).

In 1975, the federal government devolved responsibility for both water and sanitation from OSN to the provincial level. In Cordoba province, this was managed by a new entity (EPOS). However, in 1990 the provincial government transferred responsibility for sanitation to the Municipality of Cordoba, while retaining responsibility for the water supply. On April 21, 1997, due to a lack of public funding, the provincial government signed a concession contract with the private consortium Aguas Cordobesas to supply water for the city of Cordoba. The municipality took no part in the negotiations, although the area for the water concessions was confined exclusively to the jurisdiction of the municipality.

***Objectives:***

The objective of this public private partnership (PPP) to guarantee sufficient water supply through a concession agreement that included the following targets:

- Operate and maintain the 2,766-km pipe network.
- Reach 97 percent water coverage by the end of the concession (Year 2026).
- Pay royalties to the provincial government both for water abstraction (\$0.019/m<sup>3</sup>) and for water transportation (\$0.077/m<sup>3</sup>).
- Reduce the average tariff by 8.2 percent at the start of the concession.
- Carry out an investment program of \$150 million in the first two years.

***Description of the activity:***

**1. Privatisation Process**

In 1989, public sector borrowing 12 percent of the GDP, this was coupled with a severe financial crisis and hyperinflation in December 1989. The government of President Carlos Menem initiated a major structural adjustment program designed to radically reduce the need for public sector borrowing through economic liberalization (tariff and non-tariff reduction), financial and economic deregulation (transport, ports, and postal service), currency convertibility for establishing parity

between the Argentine Peso and the U.S. dollar, and reform of the government, involving wholesale privatisation of state companies.

The privatisation process had two important stages. During the first stage (1989-91), telecommunications and civil aviation were key sectors that were privatised. However, the state negotiated badly, failing to ensure competition, contract compliance, and the establishment of an adequate regulatory mechanism prior to the sell-off. During the second stage (from 1992 onwards), the gas, electricity, and water sectors were privatised. This time, however, there was a marked improvement in the negotiating capacity of the state, and regulatory frameworks were established prior to the sell-off.

The privatisation was also moved to the provincial and municipal governments, as the Cordoba municipality prepared a strategy document for PSP in basic service provision. However, the provincial government did not devolve the water supply to the municipality, mainly due to financial considerations, as the concession contract could provide a substantial revenue increase in the form of royalties amounting to \$13 million in 1999.

**2. Concession contract:**

Under this 30-year concession contract, Aguas Cordobesas would manage the operations of water supply and sanitation within the 24 sq. km jurisdiction of the Cordoba municipality. Aguas Cordobesas, owned by a consortium of Argentinean and foreign companies, has paid-up capital of \$30 million with a French utility multinational, Suez-Lyonnaise des Eaux, as the largest shareholder and operator of the utility.

The break-down of the shares is: Suez Lyonnaise des Eaux (France, Belgium) with 37.45 percent; Aguas de Barcelona SA (Spain and 25 percent owned by Suez Lyonnaise des Eaux) with 15.39 percent; Inversora Central SA (Argentina) with 14.94 percent; Empresa Constructora Delta SA (Argentina) with 14.50 percent; Banco de Galicia y Buenos Aires SA (Argentina) with 11.11 percent; and Servicios del Centro SA (Argentina) with 6.67 percent.

The total investment plan has been estimated at around \$500 million, needed in order to reach the coverage target. From 1997 to 1999, the concessionaire carried out investments worth \$84 million, including a \$40 million, 10-year loan with a 3-year grace period, from the European Investment Bank (EIB). The loan represented 47 percent of the first five-year investment plan.

**3. Tariffs:**

The current tariff structure is complex and inequitable, as both volume-based and property-based charges combine to determine the tariff. All households pay the same basic charge, directly related to the size of their property, for a minimum volume as shown in Box 1.

Box 1. Tariff structure under Cordoba water concession project.

<i>Property Size</i>	<i>Monthly Minimum Consumption</i>
Up to 50 m <sup>2</sup>	15 m <sup>3</sup>
From 50 m <sup>2</sup> to 150 m <sup>2</sup>	0.3 m <sup>3</sup> per m <sup>2</sup>
From 150 m <sup>2</sup> to 250 m <sup>2</sup>	45 m <sup>3</sup> plus 0.25 m <sup>3</sup> per m <sup>2</sup> above 150
From 250 m <sup>2</sup> to 350 m <sup>2</sup>	70 m <sup>3</sup> plus 0.20 m <sup>3</sup> per m <sup>2</sup> above 250
From 350 m <sup>2</sup> to 500 m <sup>2</sup>	90 m <sup>3</sup> plus 0.15 m <sup>3</sup> per m <sup>2</sup> above 350
Above 500 m <sup>2</sup>	112 m <sup>3</sup> plus 0.10 m <sup>3</sup> per m <sup>2</sup> above 500

This approach has negative impacts on equity, as on the one hand the property-based basic charge is very regressive with regard to the size of the property, as larger size properties (wealthy individuals) are allowed more volume and therefore only a few rich individuals pay progressive tariff rates incorporated in the stepped tariff. On the other hand, even the consumers of excess water pay only mildly progressive tariffs, as properties are not individually classified according to their value, because high-value properties in lower band zones benefit and low-value properties in high band zone suffer from this arrangement.

Another issue is metering, as the contract stated that metering would be gradually introduced and that new domestic connections would have meters installed. The concessionaire installed 5,000 new meters during 1997-2000; however, in low-income communities no meters have been installed. The

concessionaire was not charging these low-income communities. Therefore, ERSEP was negotiating for the introduction of a so-called “social tariff” for these low-income communities at \$5 per month. This would be a very cheap solution, as the communities were paying \$30 per month for 6 m<sup>3</sup> to private vendors at the time.

#### **4. Other Challenges:**

Some of the main challenges under this contract are:

- The coverage target is 97 percent; however, there are serious problems including land titling in poorer communities; however, the mayor has committed to grant land titles to the poor.
- At present, the municipality supplies water through tankers to the poorer communities for which apparently no charge is being made. There is no coordination between the municipality and Aguas Cordobesas on this issue.
- Some vendors supply low-quality water at high costs. There is a generally-agreed policy to gradually reduce the number of these vendors. However, the contract does not spell out specific targets. As a result of ERSEP’s active involvement in the negotiations, 11 out of 44 vendors have been transferred to Aguas Cordobesas.
- According to the contract, the responsibility of the concessionaire is to construct the primary pipeline in the extending network only and the responsibility of constructing the secondary pipeline (defined as less than 160 mm in diameter) and residential connections are the responsibility of the municipality and/or the households. Many households in low-income communities believe that the concessionaire should construct the secondary pipeline. Future success in meeting the coverage targets depends upon the solution to this problem.
- Land use policies are not being properly implemented, as powerful real estate companies have influence over the direction of city growth. This increases the problems for the concessionaire when trying to plan according to land use plans.

### **Critical Instruments**

#### **Organisational arrangements**

##### ***Role of Regulatory Body***

When public-private partnerships for water supply contracts emerged in the 1990s, the regulatory bodies were often established only *after* the key privatisation decisions were made. This approach resulted in major complaints about high price increases and poor service quality after the contracts went into effect. In one example, the Province of Tucuman in Argentina awarded a 30-year concession contract to Vivendi in 1995. The company doubled tariffs, after just a few months of operation, without improving water quality—indeed; it became “inexplicably” brown. This led to a public protest, and 80 percent of residents stopped paying their bills.

The new governor of Tucuman started a campaign that led to the cancellation of the contract in 1998, and resumption of water operations by the provincial government. Vivendi then filed a \$100 million lawsuit against the government. In the year 2000, however, the government sought to encourage greater competition among privatised utilities by clamping down on what were seen as abuses of privilege by private companies that have benefited from the monopolistic conditions under weak regulation.

Such a tightened stance was reflected in the province of Cordobesas, as it created the new Secretariat for Control and Management of Contracts, and water and sanitation became the responsibility of the Water and Sanitation Department. Another novel multi-sector regulatory agency (ERSEP) was created to regulate a diverse range of privatised public services including those provided by Aguas Cordoba. This agency will be financed through a 1.5 percent levy on the tariffs of the privatised utilities as well as any fines that it imposes.

This has made ERSEP controversial, as Buenos Aires’s ETOSS is financed through a 0.67 percent levy on water bills. ERSEP contracts out the monitoring of water quality to a state-owned laboratory that examines 600 samples per month. ERSEP also monitors the implementation of the investment program of the concessionaire, Aguas Cordobesas. Therefore, it is unclear whether ERSEP

will play a role of a regulator to balance the interest of consumers and of the private concessionaire, or if it will play a role of contract enforcement on behalf of the provincial government.

### Impacts

Following are the major outcomes until the end of 1999 for this concession contract:

- The citizens and the provincial government perceived the overall performance of the concessionaire as satisfactory. The coverage has increased from 1,000,000 to 1,140,000 inhabitants in two years (1997-1999) with the number of connections increased from 208,526 to 223,462 during the same time period. Water production varied from 350,000 m<sup>3</sup>/day in winter to 440,000 m<sup>3</sup>/day in summer, totalling 140 million m<sup>3</sup> of distribution during 1999.
- Annual gross income was \$65 million with a net profit of \$5 million, representing a rise of 11 percent above 1998 profits. The concessionaire paid \$9,922,000 for water abstraction and \$3,149,668 for water transportation, totalling \$13,071,668 in royalty payments. The staff numbers fell from around 1,300 before the concession contract to 436 in 1999, making a ratio of 1.95 staff per 1,000 connections.
- The concessionaire has provided three direct benefits to consumers, including an 8-percent price reduction in average tariffs, an end to water cut-offs, and improved water quality, leading to a sharp drop in the sales of bottled water. The indirect benefit is through annual royalty payments averaging \$13 million to the provincial governments, which can undertake other development projects for the community.

### Lessons Learned

- It was found that a policy is needed about cutting the supply of water to customers if they do not pay their water fees. Aguas Cordobesas has not yet cut supply to customers who have defaulted on their water bills. The company has started legal proceedings to obtain debts totalling \$2 million from 2,500 customers (1.1 percent of total customers) who have refused to pay their bills since the award of the contract. The non-payment of the bills is not due to the question of affordability, but rather, to a long-standing and widespread practice of perceiving water as a free good.
- In negotiating water supply contract such as this, it is important to address the question of sequencing of the investment program. Under the terms of the contract, Aguas Cordobesas must achieve 97 percent coverage by 2026. The total investment required to meet this target has been estimated at between \$400 million and \$650 million. In contrast to a contract the consortium has in Buenos Aires, however, the Cordoba contract does not specify five-yearly coverage targets in the framework of the total period of the overall concession. This situation raises the risk of “back – loading,” whereby the concessionaire postpones major investments until the end of the concession period. In this eventuality, the residents of low-income areas would be the main stakeholders that would suffer from delays in construction to the network.
- The separation of water supply from sewerage will make it difficult to optimise resources, including the protection of bulk water supply and tariff collection from the same consumers.
- The exclusion of the local government from the contract makes coordination a difficult task on various issues, as discussed above, where low-income communities will suffer the most.

### Potential for Application

This type of public-private partnership experience can work well in countries that are not yet politically willing to go for higher levels of privatisation (as has been done in PPP projects in Manila). In the Buenos Aires case the ownership remains with the government. This type of arrangement, where the private sector has to pay royalties to the government (\$13 million annually in this case), provides earnings for the government to supplement their budgets for other development work.

This arrangement also improves efficiency by reducing the number of staff per water supply 1,000 connections (as mentioned here, to 1.95 staff per 1,000 connection in this case). This is an

important issue in most Asian countries; therefore, this experience can help these countries to reduce staff and improve the efficiency of public services.

Overall, real price reductions are likely to occur in this type of arrangement, in contrast to the traditional (and sometimes erroneous) belief that a shift to private sector management will result in an increase in prices (in the Buenos Aires case, the actual result was an average 8 percent reduction in tariffs, as mentioned). Moreover, the quality and quantity of water also improves. Results such as these increases the potential for the replication of such experiences in the Asian region.

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