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2001

NOVEMBER

THE WATER TRUCE

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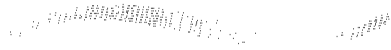
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THE "WATER TRUCE"

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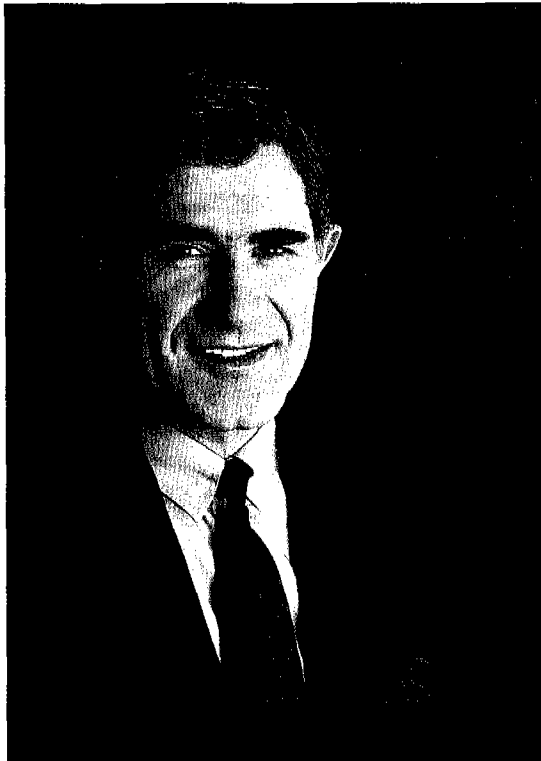


CONTENTS

THE "WATER TRUCE": AN OPEN LETTER FROM GERARD MESTRALLET	04
THE SUEZ WATER RESOURCES ADVISORY COMMITTEE	08
PUBLIC-PRIVATE PARTNERSHIP IN MANAGEMENT OF WATER SERVICES: AN EFFECTIVE APPROACH	11
<i>Water and sanitation concession contract: Buenos Aires metropolitan area (Argentina)</i>	13
<i>Multi-services water, sanitation, and electricity concession contract: Casablanca (Morocco)</i>	14
<i>Drinking water production B.O.T. contract: Johor Bahru (Malaysia)</i>	15
<i>Water distribution affermage contract: Paris Rive Gauche (France)</i>	16
<i>Water supply Operation & Maintenance contract: Atlanta (Georgia, USA)</i>	17
<i>Water and sanitation services management support contract: Amman (Jordan)</i>	18
<i>Water and sanitation services management support contract: Federal District of Mexico City (Mexico)</i>	19
WATER FOR ALL: THE ONDEO PROGRAM FOR SERVING LOW-INCOME COMMUNITIES	20
<i>La Paz and El Alto: Water for All in the poor suburbs</i>	21
<i>Buenos Aires: 800,000 people in poor neighborhoods recently connected to the drinking water system</i>	26
<i>South Africa: water supply for rural and peri-urban communities</i>	30

THE "WATER TRUCE"*

An open letter



Gérard Mestrallet,
Chairman and Chief Executive Officer, SUEZ.

For all of us, the tragedy of September 11 marked the day the world changed. Terrorism struck the blow. But looking behind terrorism we find that one of the root causes is the particularly dangerous form of economic continental drift that widens the gap between rich and poor countries. This doesn't excuse terrorism, but it provides the kind of no-hope environment in which extremism too easily takes root. Access to water may be one of the most vital of the issues involved to underpin development and prosperity, and to provide hope. This is the reason why, more than ever before, we need to find new answers and new forms of solidarity. We need to get rid of opposing economic and ideological standpoints. Of course SUEZ has an interest in making this happen, but we see this issue as infinitely larger than our own corporate outreach. We think we have a lot to contribute to the global dialogue needed now, on how to make this happen now.

If water, as a geopolitical issue, entails risks of conflict, it happens more rarely than we think. During the last four decades, only nine of the armed conflicts around the world have been partly motivated by issues involving access to water. In all, 141 treaties have been signed on the concerted management of transboundary water resources. The Indo-Pakistani treaty on the Indus was signed in 1960 and has survived periods of extreme political tension.

Conflicts over water are not the real issue at stake here. The issue we are facing rather deals with the following questions. Why don't people have water? Why do we allow water-related diseases to kill 30,000 children every day? Why does the proportion of city-dwellers that benefit from drinking water diminish every day? Why does the development of networks for drinking water and sewage systems not keep pace with exponential demographic growth and urban sprawl?

I am horrified by the very sobering reality that underlies the answers to these questions. The money, the resources, the know-how that we should be applying to this task are stalled in dogmatic discussion. We need to clear the air about the fears of privatizing water, we need to talk about which forms of economic activity might require that some

* Rudyard Kipling – The Second Jungle Book



water be treated as a commodity, and we need to face the concerns that exist about what some call the internationalization of the water industry. Our company is ready to enter into real dialogue to clear the misconceptions that exist. In providing our services, we are for transparency and accountability.

The word "internationalization" has no meaning when applied to water services. We are certainly an international company but we provide services right there where we manage local resources that cannot be transported far. We work under contract with local authorities, using fixed infrastructures. Moving water out of the area of service provision, or moving the infrastructure is quite simply not possible. But we are very ready to listen to what the concerns are on this and other points.

It might help if I opened up some parts of the dialogue now. At SUEZ we have listened to the concerns expressed, and we have tried to reflect these in our approaches and in our thinking.

I think we should be able to agree that water is a common good, one of the basic public goods. At SUEZ, we are opposed to the private ownership of water resources precisely because

in our eyes water is not a commodity. We do not trade in water. We do not sell a product. We provide a service. The service of making clean water continuously available to all, and returning water to the natural habitat once it has been treated. It is the price of that service that is billed, and not water as a raw material.

I think we should be able to agree that the public sector remains the owner of both types of assets, water and water infrastructures. The transfer of water infrastructure from public to private ownership is unnecessary in most developing countries. The preferred form of operation for SUEZ is a public-private partnership in which the operation of the assets is entrusted to a private operator for the term of the contract. It is up to the operator to maintain and improve the infrastructure. Through contracts based on this model of delegated management, whether in Casablanca or in Buenos Aires for instance, we have invested nearly two billion dollars in engineering structures that will be returned to the local authorities at the end of the contracts.

I think we should be able to agree that the universal right of access to water must be recognized and that we should get down to work now to turn that right into a reality every day. In many places, the poorer you are, the more you pay

for water, and the lower its quality. I am particularly proud of the fact that our actions have extended services to nine million customers living below the poverty line. Serving those people is an objective to which we are committed by contract. Connecting underprivileged districts to the public water system is a basic tenet of social justice. For SUEZ it is not a question of corporate philanthropy. We are merely doing our job, and our duty. Of course there are problem areas; there always are. We continue to search for solutions. It is indisputable that the public-private partnership model has produced tangible results.

I think we should be able to agree that this sector desperately needs more investment and that the form of investment chosen should be adapted to reality. There is not enough money in national treasuries to make the investment needed happen. 180 billion dollars are required each year for the developing countries alone.

☛ Leveraging such resources requires a combination of private finance and national or multilateral funds. That is the politician's role. Initiative and control are the responsibility of the public authorities, deployment and management that of the private sector: that is the true meaning of a public-private partnership. Private groups are trained to intervene quickly, and to achieve tangible, verifiable results. They are ready to pursue their efforts by inventing technical, contractual and financial solutions suited to the reality of local conditions, under the supervision of public authorities in each country.

We share the view that has been growing for the past ten years, and is supported by some governments and international institutions, that public-private partnerships are a very good way to renew water infrastructure, to leverage new sources of finance and to apply more efficient management methods.

Our Group's century of experience in managing water services for local authorities has seen extraordinary change over the past 10 years. Today our subsidiary Ondeo serves 115 million people around the world, from Buenos Aires to Santiago de Chile, in La Paz, Casablanca, Atlanta, Budapest, Mexico City, Jakarta, Manila, Amman, Barcelona, Indianapolis, New Delhi, Gaza.

In Buenos Aires over the last eight years we have connected 1,6 million inhabitants to the drinking water network and nearly one million to a sewage system. The water service charge is still less than when the contract started. In the same way in La Paz, Bolivia, all the inhabitants will have access to drinking water before the end of 2001, when only 60% had

**/// We do not trade in water.
We do not sell a product. We provide a service. ///**



access in 1997. In Bolivia, in the Philippines, in Indonesia, in Morocco, in Argentina, these new customers are often underprivileged families, living in shantytowns.

In towns and in rural areas, we involve local communities in decision-making and sometimes in carrying out the construction work, backed by efficient local NGOs. Where these solutions have been adopted, the price of water has been decreased tenfold in comparison with that of water dealers, and its quality is incomparably better.

These outcomes are encouraging, but they are far from meeting today's needs. The situation is being stalled by inappropriate debates. This is why, two years ago, I set up a committee of 20 independent world-class experts from 17 different countries, all of them internationally recognized specialists in water and sustainable development. For a private sector group it was a new initiative, but one that was needed. Someone had to think to the future, to rethink policies for sustainable management of water resources and services around the world. Backed on the one hand by the wise reflections of that committee, and on the other hand by the solid experience of SUEZ teams in 130 countries, I now launch this appeal: "Water for all, quickly!"

Fighting against poverty is not an option, it is an obligation and even more a number of obligations. We must fight for education, health, food. How can we do this if we do not first tackle the water issue which remains the essential condition of sustainability of our efforts ?

I remember what Kipling wrote in the Second Jungle Book when describing a drought-stricken jungle : « By the Law of the Jungle it is death to kill at the drinking-places when once the Water Truce has been declared. The reason for this is that drinking comes before eating ». Think about it, think twice.

Although it is a scarce resource, water itself is not at stake; the real challenge is to manage it in a proper and efficient manner. « Water for all, quickly ! » is attainable. We all have an interest in finding solutions now. The world needs the efforts of each and everyone to build a "Water Truce". Opposing economic and ideological standpoints need to be worked on so that these cease to be so very detrimental to the interests of the underprivileged everywhere around the world. This will only be possible if the political authorities in every country take immediate action to lay the groundwork for a more ambitious, efficient water agenda.

This is the message that, in the name of SUEZ, and as a concerned citizen, I address this week to Governments, Members of Parliaments and International Institutions throughout the World.

Gérard Mestrallet

THE SUEZ WATER RESOURCES ADVISORY COMMITTEE



On February 4, 2000, the first meeting was held in Paris of the Water Resources Advisory Committee (WRAC), an independent committee created by SUEZ to support its policy analysis of major water resources management issues.

The partnership between the public sector, members of the community at large, and the private sector is at the heart of the Committee's proceedings, chaired by Margaret Catley-Carlson.

Margaret Catley-Carlson: *"The point is not for us to say whether a project is good or not, or if it will be profitable. We can say, however, how the inhabitants of a country or region will perceive a project, and what risks it may incur, if any, on the environmental, social, political or financial levels. In other words, we can help the group by opening eyes to a project's every facet, and not simply focusing on its technical features alone."*



Margaret Catley-Carlson

THE REASONS FOR THE WRAC

SUEZ created the WRAC as part of its commitment to be a responsible corporate citizen, which is of particular importance given the nature of its business: delivering the essentials of life – water, energy, and waste services. These services, particularly water supply and wastewater treatment, involve a high degree of social commitment.

SUEZ's line of conduct is threefold:

- be a powerful voice for proposals, creativity and innovation;
- have an exemplary mode of corporate governance that is open and attentive to the expectations of the community at large; and
- enhance its relationships with political entities, community representatives, non-governmental organizations, and industry associations.

THE WRAC'S APPROACH: MUTUAL RESPECT AND SHARED EXPERIENCES

The WRAC is a group of experts from 17 very different national backgrounds who represent a wide range of skills in areas such as irrigation, international law, the environment, social development, and finance. They also come from varied professional backgrounds, such as research, international institutions, government administration, and business.

WRAC members are chosen based on their expertise and their independence. Membership is subject to approval by the majority of other members and by SUEZ. Participation is personal and does not involve a members' particular organizations.

The originality of SUEZ's initiative is to invite independent experts to take positions on issues and projects free from outside constraints. Discussions are characterized by the quality of the members' interpersonal relations, their shared willingness to listen, complete freedom of expression, and of course, confidentiality.

The Committee meets twice a year; work continues between two sessions through on-line communications between



Latest meeting in Paris -- an emphasis on communication

working groups which focus on topics chosen at the end of each session. Administrative support for the Committee's work is provided by SUEZ's water resources division.

HIGHLIGHTS

Since February 2000, WRAC members have met in Paris, Macao, Buenos Aires, and again in Paris for their fourth session.

Each meeting has generated a strong message:

- ④ At the first Paris session, SUEZ was encouraged to take a more active part in managing water resources in each of its operations.
- ④ The second session, in Macao, underlined the importance of community and NGO messages.
- ④ The third session, in Buenos Aires, offered the WRAC the opportunity to observe from the field Ondeo's work in providing water and sanitation services to low income communities. At the same session, the public-private partnership formula was seen as the ideal solution for providing such services to those most in need.
- ④ The fourth session, held in Paris, provided members from all over the world an opportunity to exchange their assessments of the international situation following the tragic events of September 11.

Despite discussion at major international conferences on water, significant improvements have yet to be made where it counts most, in the field. At the same time, certain international finance organizations have reduced their water and sanitation sector funding. In this respect, the cause of humanity has regressed in recent years.

Against this background, the WRAC has supported SUEZ's pol-

icy not to slow its international development and investments, as demonstrated by contracts recently signed in Indonesia or the United Arab Emirates, as well as the company's listing on the New York Stock Exchange, September 18, 2001.

Now, more than ever, the public-private partnership concept will provide an indispensable framework for contributing solutions to water supply and wastewater collection and treatment problems in developing countries.

The fact remains, however, that this concept is insufficiently explained, and, as a result, poorly understood.

To pursue the development of public-private partnerships will require SUEZ to cooperate even more with all those concerned, and to communicate more effectively at every phase of project development, completion, and operation.

The WRAC also encouraged SUEZ to extend its research and activities to areas where its skills can meet needs, upstream and downstream of operations, in order to contribute to an improved, and better integrated, management of water resources.

According to the WRAC, SUEZ has a genuine part to play in reducing the gap between the industrialized nations and developing countries. It has therefore encouraged the Group to give wider exposure to its achievements in this area.



WATER RESOURCES ADVISORY COMMITTEE MEMBERS

WRAC members are chosen for their expertise. Their participation is based on their personal capabilities, and does not involve their respective organizations. Each new member must be accepted by the majority of the Committee and by SUEZ.

MEMBERS	COUNTRY OF ORIGIN	PROFESSION
Mr. Mohamed BENBLIDIA	<i>Algeria</i>	Engineer, Professor, President of the Mediterranean Water Institute
Ms. Laurence BOISSON de CHARZOURNES	<i>France</i>	Professor of Law at the University of Geneva
Mr. Adil A. BUSHNAK	<i>Saudi Arabia</i>	Professor and Consultant Supreme Economic Council
Mr. Jose Bernardo CABRAL	<i>Brazil</i>	Senator, Jurist, water law specialist
Ms. Margaret CATLEY-CARLSON	<i>Canada</i>	President of the Global Water Partnership, Advisor to various national, and international organizations, both public and private
Mr. Madhav A. CHITALE	<i>India</i>	President of the South Asia Technical, Advisory Committee of the Global Water Partnership
Mr. Manuel CONTIJOCH-ESCONTRIA	<i>Mexico</i>	President of the Irrigation and Drainage Commission of Mexico, Consultant
Mr. Michel DESBORDES	<i>France</i>	Hydrologist, Professor at the University of Montpellier II
Mr. Alfred DUDA	<i>United States</i>	Hydrologist, Biologist, Global Environment Facility
Mr. Jose-María FLUXA	<i>Spain</i>	Professor at the University of Madrid, President of the Foro de Agua, comprising specialized Spanish water engineers
Mr. Namik KILIC	<i>Turkey</i>	Consultant, Public-private partnership specialist
Mr. Cosimo LACIRIGNOLA	<i>Italy</i>	Advisor, President of the Mediterranean Agronomy Institute, Ministry for Agriculture staff member
Mr. Guy LE MOIGNE	<i>France</i>	Advisor, Consultant to the World Bank
Mr. Jean MARGAT	<i>France</i>	Consultant to the Geological and Mining Research Bureau, Vice Chairman of the Blue Plan
Ms. Tabeth MATIZA-CHIUTA	<i>Zimbabwe</i>	President of the South African Technical Advisory Committee, GWP, Vice President IUCN
Ms Yi QIAN	<i>China</i>	Member of Parliament, Engineer, Professor
M. Koussai QUTEISHAT	<i>Jordan</i>	Managing Director of the Middle East Desalination Research Center
Mr. Abdullah SHARIZAILA	<i>Malaysia</i>	Engineer, International Water Management Institute, ICID, GWP
Ms. Patricia WOUTERS	<i>Belgium</i>	Professor of International Public Law, University of Dundee

PUBLIC-PRIVATE PARTNERSHIP IN MANAGEMENT OF WATER SERVICES

an effective approach

Public-private partnership is based on a **contract** between a public authority and a private sector service provider. The public authority entrusts specific tasks to the private sector and stipulates precise objectives. The public authority retains regulatory control and ownership of all related assets. Delegated management contrasts with privatization, which is based on an ownership transfer to the private operator.

Delegated management provides an ideal framework for attracting private capital to the water sector. Funds are used for new investments, not for acquisition of existing facilities. Compared with privatization, this means rates to the consumer can be minimized.

Delegated management is a partnership between public and private bodies that places each party in the role it performs the best and in which it is most legitimate.

Public authorities establish the main service objectives and rules of operation, as well as the mode of competitive bidding, and performance measures. They also set environmental protection and quality control standards and water service rates.

The private-sector operator provides its accumulated, and continually updated, technical and managerial know-how. By contract, it commits to achieving verifiable results in terms of service quality, the expansion of the area served, or investment program. It lends its credibility to attract financing for the project from a range of sources.

Delegated management is a concept that can be adapted to every local situation; the scope and duration of the pri-



vate contractor's assignment, as well as the mode of remuneration, are determined in relation to the political decision-makers' priorities.

There are five main types of delegated management, according to the scale of the operator's financial commitment and the source of its remuneration:

1. A concession is a contract under which a private operator assumes responsibility for operating existing infrastructure assets for a period of 20 to 30 years with a commitment

to improve the assets and to provide new ones. During that period, the concessionaire is responsible for delivering the service to customers and, throughout the term of the contract, financing the investments involved. (Examples: Buenos Aires, Casablanca)

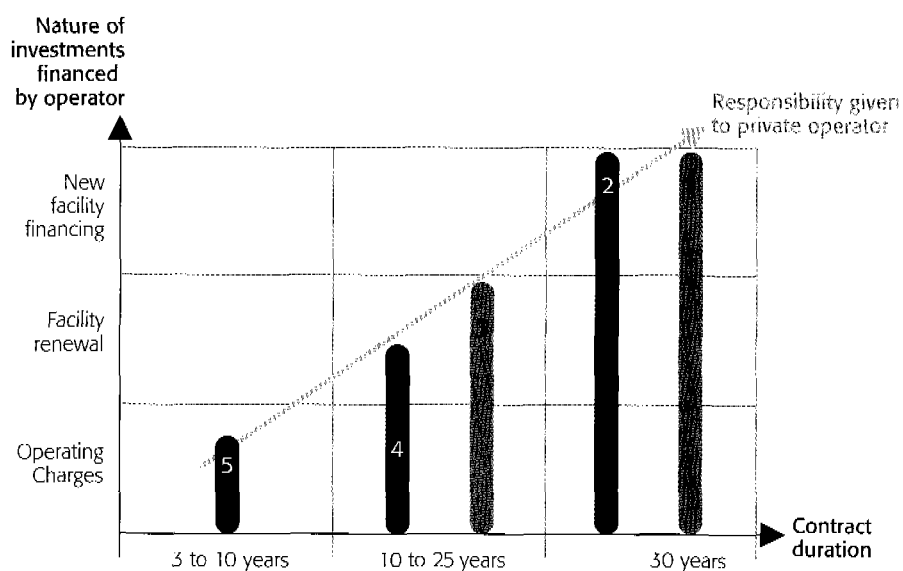
2. Under a **BOT** contract (Build, Operate, Transfer), the operator finances, builds, and operates the new facilities for drinking water production, wastewater or sewage treatment; the BOT contractor bills the public authority for the service. Unlike the concession, the end-customer is not the user but the public authority. (Example : Johor Bahru)

3. Under an **affermage** contract (or lease agreement), the operator manages the service and maintains the facilities for a period of 10 to 20 years. The contractor finances the renewal of existing facilities, but is not responsible for financing new infrastructure. In most cases, the operator invoices users for the water service. (Example: Paris Rive Gauche)

4. Under an **Operation & Maintenance (O&M)** contract, the operator has complete responsibility for the operation of the facilities and is paid for the service by the public authority which owns the infrastructure. (Example: Atlanta)

5. Under a **management support** contract, the operator is responsible for performing a limited number of tasks with specific objectives, such as reducing leaks, increasing invoicing or recovery rates, and improving customer relations. The operator is paid by the contract-granting authority according to a schedule of rates that can be adjusted to success in meeting performance criteria. (Examples: Amman, Mexico City)

Intermediate types of contracts which include features of more than one of these main categories can be designed to meet particular local requirements.



Type of contract	Source of payment to operator
1 Concession	End-user (water bill) ●
2 BOT	Public authority ●
3 Affermage	End-user (water bill) ●
4 Operation & Maintenance	Public authority ●
5 Management support	Public authority ●



WATER AND SANITATION CONCESSION CONTRACT *Buenos Aires metropolitan area (Argentina)*

The Buenos Aires water services contract is the largest ever attributed anywhere in the world. It was awarded following a call for tender to Aguas Argentinas, which is a consortium of Argentinian and international investors. SUEZ' subsidiary Ondeo Services is the lead shareholder and operator.

The task is immense. Today, more than 10 million people live in the concession service area. When the contract was signed, 2.6 million of them had no access to the drinking water network and 5 million were without access to a wastewater treatment system. In most cases those not served were very low-income families. Ninety-five percent of the wastewater was discharged untreated into the natural surroundings. Between now and 2023, Aguas Argentinas is contractually bound to extend drinking water service to the entire population and to provide wastewater treatment services to 95% of the population.

RESULTS

As of today, Aguas Argentinas has already invested more than USD 1.6 billion in developing infrastructures. This is a yearly rate 18 times higher than before 1993, generating 8,000 new jobs for suppliers and subcontractors.

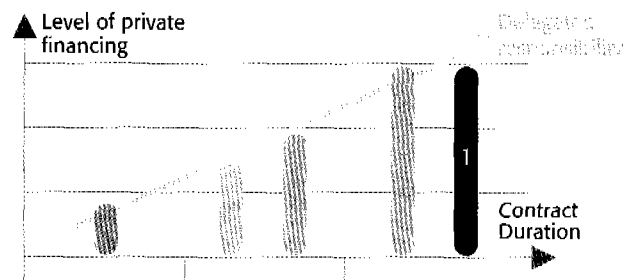
Worth citing among the results obtained are:

- a 37% increase in drinking water production capacity, thus ending summertime water shortages;
- the extension of drinking water systems, enabling 1,600,000 additional people to be connected (including 800,000 in low-income neighborhoods);
- connection of some 1 million inhabitants to the sanitation network;
- a billing recovery rate of 94% and a customer satisfac-

tion ratio of 70%.

The price of water remains lower in 2001 than it was before the concession was awarded.

The main operations currently under way involve extending sanitation coverage, and extending the systems to low-income areas



Responsibility of private operator:

● Total

● Partial

	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
Extension of system, upgrading	●	●	●	●
Renewal of facilities	●	●	●	●
Administrative management, customer service management	●	●	●	●
Technical operations	●	●	●	●

Ondeo subsidiary: Aguas Argentinas

Shareholding: 35.59%

Contracting entity: The Federal Government of Argentina

Start of contract: April 1993

Contract duration: 30 years

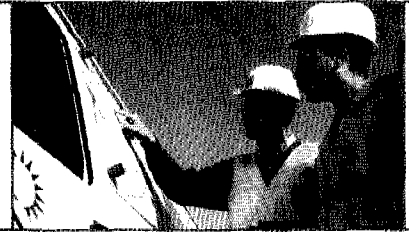
Employees: 3 787

Population served: Approx. 10,000,000

Total investment: USD 1,6 billion

MULTI-SERVICES WATER, SANITATION, AND ELECTRICITY CONCESSION CONTRACT

Casablanca (Morocco)



The delegated management contract in Casablanca provides for an investment plan of some USD 3 billion over 30 years, approximately USD 200 million of which have already been invested. The contract covers drinking water distribution and sanitation services for 27 municipalities (4 million people) and electricity supply.

With 35% ownership, Ondeo Services is the main Lydec shareholder. SUEZ is also present through Tractebel's subsidiary Elyo (24%) and Aguas de Barcelona (5%).

When the contract became effective, Lydec retained the entire staff (4,200 employees) of the previous public water board.

RESULTS

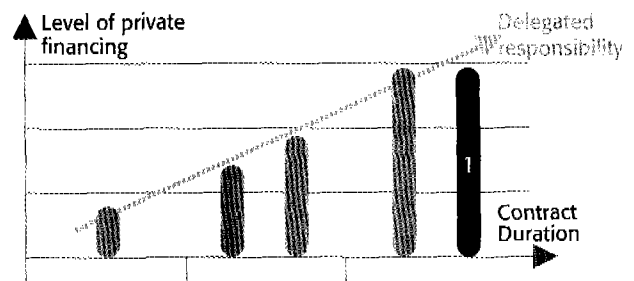
Flooding after storms, which periodically destabilized the city's economy, has been eliminated following a major pipeline cleanout campaign, and the opening in November 1999 of a diversion tunnel for the principal sewer in the urban area. In all, USD 70 million have been invested in sanitation services since the start of the contract.

Thanks to improved management practices, the drawing down of water resources in the area has been decreased by 12 million cm in 2000. This is the equivalent to the consumption of a city of 200,000 people.

Customer satisfaction rose from 50% in 1997 to 85% in 2001, thanks in particular to improvements in the quality and number of customer centers.

More than 90,000 hours of training have been given to Lydec staff.

A "blue connection" program, designed to facilitate access to drinking water for very low-income individuals, was successfully launched.



Responsibility of private operator:

- Total
- Partial

	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
Extension of system, upgrading		●	●	●
Renewal of facilities		●	●	●
Administrative management, customer service management		●	●	●
Technical operations		●	●	●

Ondeo Subsidiary:	Lydec
Contracting entity:	Urban community of Casablanca
Start of contract:	April 1997
Contract duration:	30 years
Employees:	3 683
Number of connections:	516,000 for water 583,600 for electricity
Total investment:	USD 190 million



DRINKING WATER PRODUCTION BOT CONTRACT

Johor Bahru (Malaysia)

The Government of the State of Johor granted Equiventures Sdn. Bhd. a contract to modernize, finance, and operate the water treatment and bulk supply systems for the city of Johor Bahru.

Equiventures is a joint venture between Ondeo Services (25.5%), and several Malaysian partners.

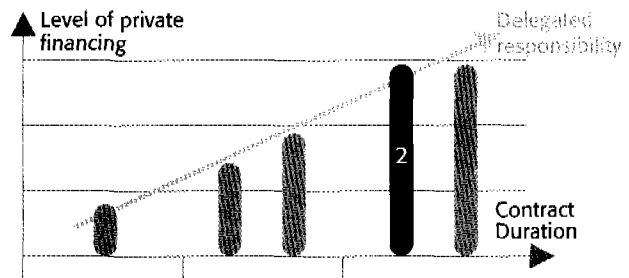
RESULTS

From the technical point of view, the facilities have been modernized and their capacity extended from 182,000 to 377,000 cubic meters per day (through extension of an existing production plant and construction of a new one). Ninety-five percent of production capacity is used today. This will be increased to 536,000 cubic meters per day in 2003, through a further new extension.

The establishment of a water resource management tool has facilitated significant improvement in plant energy efficiency and in the ability to respond to climatic risks such as El Niño, whose occurrence in 1997 caused a drought the following year.

Equiventures, the contracting company, delivered and even surpassed all the objectives that were set in terms of the quality and quantity of water.

Part of the assignment of the private sector partner was to favor technology transfer. Intense training programs have been set up to develop local management capabilities: operations management is now entirely performed by Malaysian personnel.



Responsibility of private operator:	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
● Total	●			
● Partial				
Extension of system, upgrading	●			
Renewal of facilities	●			
Administrative management, customer service management				
Technical operations	●			

Ondeo subsidiary:	Equiventures Sdn. Bhd.
Contracting entity:	Government of the State of Johor
Start of contract:	July 1992
Contract duration:	20 years
Employees:	83
Total investment:	USD 115 million

WATER DISTRIBUTION AFFERMAGE CONTRACT *Paris Rive Gauche* (France)



Affermage or lease contracts are a type of public-private partnership frequently used by municipalities in France. For example, in 1985 Eau & Force (Parisienne des Eaux) was granted a lease by Paris City Hall to distribute drinking water to the six precincts located on the Seine's left bank.

RESULTS

Eau & Force's objectives in Paris are:

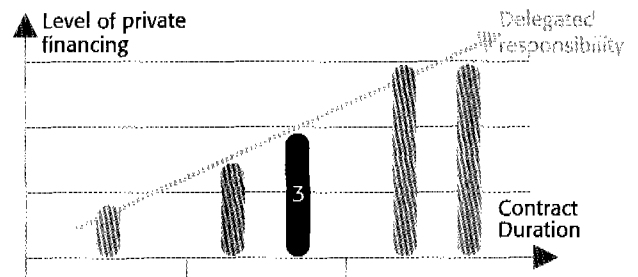
- Economic efficiency. The company manages the system with a headcount of 77; the cost of water distribution represents only 14% of the total price of water and sanitation services.

- Technical efficiency. Since the contract entered into effect, 10 million cm per year have been saved by reducing water losses. Sophisticated technical resources, combining a measurement network and mathematical models, are used to detect and locate leaks in real time.

- The quality of customer relations. Eau & Force has made commitments to communicate about water quality, price and follow-up of consumption as well as to simplify administrative formalities, and provide emergency services.

As part of the contract, the operator has financed and carried out the refurbishment or renewal of the water supply network. In fifteen years, 260 km of mains representing 46% of the entire length of the network have been rehabilitated.

In the Ile-de-France region, Eau & Force also takes part in the management of the Surface Waters Pollution Alarm network (APES), which uses automatic analysis stations to monitor the quality of the water in the Seine river in real time.



Responsibility of private operator:

- Total
- Partial

	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
Extension of system, upgrading				
Renewal of facilities		●		
Administrative management, customer service management		●	●	
Technical operations		●		

Ondeo subsidiary: Eau & Force (Parisienne des Eaux)

Shareholding: 100%

Contracting entity: Paris City Hall

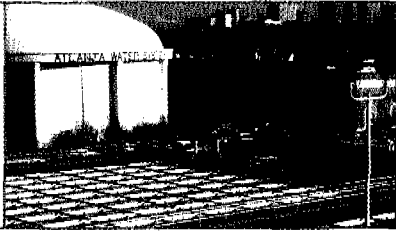
Start of contract: 1985

Contract duration: 25 years

Employees: 77

Population served: 750 000 (night)
1 500 000 (day)

Number of connections: 27,500



WATER SUPPLY OPERATION & MAINTENANCE CONTRACT

Atlanta (Georgia, USA)

Further to an international call for tender, the city of Atlanta, Georgia, awarded the contract to United Water Services Atlanta (65% of which is held by Ondeo Services) for the production and distribution of drinking water to the city's 2 million inhabitants. It is the largest delegated management contract ever signed in this field in the United States.

Water services were previously managed by Atlanta City Hall. The objective of the water supply O & M contract was to succeed in reducing costs thanks to technology transfer (automation and energy savings) and to an improved business organization.

RESULTS

Without any layoffs, UWSA has generated a reduction of 40% in operating costs, or US\$ 20 million per year, since the beginning of the contract.

About 30,000 leaks have been repaired, and the modernization of pumping stations has decreased the costs of energy consumption by nearly 9%.

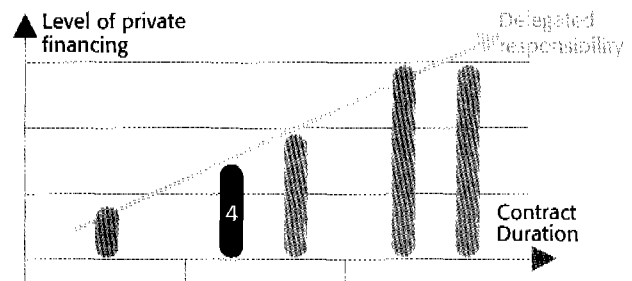
Over the term of the contract, savings should reach US\$ 400 million.

More than 6,500 hours of training have been given.

All fire hydrants have been checked and repaired, thus providing better protection against the risk of fire.

UWSA has received numerous rewards, including the "2001 US Conference of Mayor's Business Council's Excellence in Public/Private Partnership", and in 1999 the "Private Sector

Award for Outstanding Performance" awarded by the National Association of Minority Contractors (Georgia).



Responsibility of private operator:

● Total

● Partial

	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
Extension of system, upgrading				
Renewal of facilities				
Administrative management, customer service management	● Partial	● Partial		
Technical operations	● Total	● Total		

Ondeo Subsidiary:	United Water Services Atlanta
Contracting entity:	Atlanta City Hall
Start of contract:	January 1999
Contract duration:	20 years
Employees:	350
Number of connections:	139,000
Population served:	2,000,000

WATER AND SANITATION SERVICES MANAGEMENT SUPPORT CONTRACT

Amman (Jordan)



In order to avoid a water shortage due to a forecast population increase of some 2.7 million between today and 2020, the Jordanian public authorities decided to rationalize the utilization of water resources.

Against this background, a loan of US\$ 55 million was granted by the World Bank to finance investments to rehabilitate and improve water treatment plants and supply systems, investments to restructure services, as well as a management and maintenance contract. Through a call for tender the contract was awarded to LEMA, a consortium formed by Ondeo Services (75%) and a Jordanian partner.

RESULTS

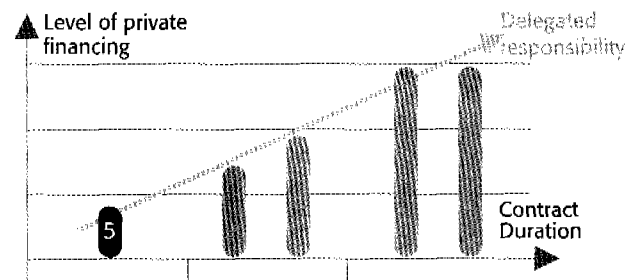
Since the contract entered into effect, and despite a severe drought, water of superior quality has been distributed in higher quantities. The preventive cleaning of sanitation systems has enabled a reduction of 20% in the number of obstructions. The electricity costs of the water treatment plant have been reduced by 6%, saving US\$ 560,000 per year.

Leaks have been repaired at a rate of up to 250 per day, and the lead-times for interventions have been considerably reduced to less than 8 hours.

An information system for customer management is gradually being implemented. The new call center designed to receive complaints, enables incidents to be immediately located and intervention teams to be sent out at once.

The efficiency of debt recovery has considerably increased. A campaign to repair and replace 50,000 water meters per year has been launched.

Finally, Ondeo Services has provided more than 35,000 hours of training for the personnel of the city water board.



Responsibility of private operator:

● Total

● Partial

	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
Extension of system, upgrading				
Renewal of facilities				
Administrative management, customer service management	●	●	●	●
Technical operations	●	●	●	●

Ondeo Subsidiary:

Lyonnaise des Eaux-MW-Arabtech (LEMA)

Contracting entity:

Water Authority of Jordan

Start of contract:

August 1999

Contract duration:

4 years

Number of connections:

290,000

Population served:

1,700,000



WATER AND SANITATION SERVICES MANAGEMENT SUPPORT CONTRACT *Federal district of Mexico City* (Mexico)

Mexico City with 19 million inhabitants is one of the cities in the world where access to water resources is the most problematic. The over-exploitation of the water table has had a catastrophic effect. Water services are managed by the Comisión de Aguas del Distrito Federal (CADF). The CADF decided to give priority to reducing water losses in distribution, which had reached an unacceptable level, and to entrust service contracts to four private operators, in order both to reduce the physical losses and to improve the invoicing and recovery rate.

TECSA, a subsidiary in which Ondeo Services has a 49% shareholding, was the successful tenderer for the southeastern zone of the Distrito Federal, where the population tends to have a low income level.

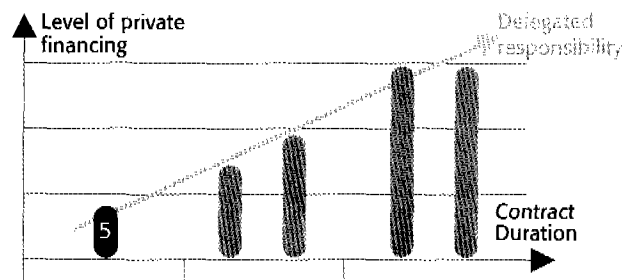
The services include:

- technical assignments
- mapping of drinking water and sanitation networks
- meter installation and maintenance
- leak detection and repair
- mains rehabilitation and private connections
- sales management
- user census
- meter reading
- issuing invoices and recovery for the Comisión de Aguas
- customer reception

RESULTS

Efforts initially focused on the installation of meters, at a rate of 7,500 per month, and 63% of household meters can be read remotely today. Six public reception centers have been set up. They annually receive 750,000 customers. Operating profits transferred to the City Hall, which were initially low, have considerably grown.

The second focus was on reducing leaks. In 7 years, 21,000 have been detected and repaired, and 33,200 connections rehabilitated. In Iztapalapa, the main district served, leaks have been reduced by one quarter saving 10 million cm of water per year.



Responsibility of private operator:

● Total

● Partial

	Drinking water		Waste-water	
	Production	Distribution	Collection	Treatment
Extension of system, upgrading				
Renewal of facilities		●	●	
Administrative management, customer service management		●	●	
Technical operations		●	●	

Ondeo Subsidiary:	Tecsa
Shareholding:	49 %
Contracting entity:	Distrito Federal
Start of contract:	1993
Contract duration:	10 years
Population served:	2,500,000
Number of meters installed:	319,198

WATER FOR ALL: *the Ondeo program for serving low-income communities*

In many megacities in developing countries, a large part of the population live in shantytowns or squatter settlements, with neither legal title nor public water infrastructure. They benefit from none of the advantages of urban life and have no access to the basic services such as household drinking water or sanitation.

Ondeo manages the water services in several of these megacities, where the company currently serves some 9 million people with very low incomes. In order to gradually connect the entire population to the public water supply system, Ondeo has set up, in its main operations, a specific program called "Water for All", designed to implement the best suited approach for each situation.

CITIES WITH ACTIVE ONDEO "WATER FOR ALL" PROGRAMS:

City	total population (thousands)	underprivileged people served ¹ (thousands)
Buenos Aires (Argentina)	11,800	1,200
Casablanca (Marocco)	4,500	1,800
Cordoba (Argentina)	1,400	160
Djakarta (Indonesia)	5,000	430
La Paz - El Alto (Bolivia)	1,600	780
Manaus (Brazil)	1,400	150
Manila (Philippines)	7,600	751
Santa Fé (Argentina)	1,800	230
Santiago (Chile)	5,100	1,020
Eastern Cape and Northern provinces (South Africa)	6,300	2,200
Total	46,500	8,720

In only a few years, millions of inhabitants have benefited from access to water in conditions that would not have been conceivable without a public-private partnership. The following three examples show how this type of partnership can be tailored to suit local conditions.

¹- People living under the poverty line.

LA PAZ

Water for All in the poor suburbs



In July 1997, Aguas del Illimani, a subsidiary of Ondeo Services, was awarded the contract to manage water and sanitation services for the cities of La Paz and El Alto, with a commitment to extend the water and sanitation system coverage. In La Paz, 45% of the population lives below the poverty line, and 73% in El Alto. As soon as the contract took effect, Aguas del Illimani systematically implemented its program in favor of low-income communities. Three years later, 57,000 water connections and 37,000 wastewater connections had been made, raising the global coverage for drinking water supply to 96% of the population and for wastewater services to 63%, compared with 68% and 50% three years before.

Access to water and sanitation services in La Paz was characteristic of urban areas throughout developing countries: municipal water supply and sanitation services were available only in the wealthier neighborhoods.

In July 1997, the Bolivian government granted Aguas del Illimani (a consortium led by Ondeo Services) a concession to operate and expand water supply and sanitation services in La Paz and El Alto. Aguas del Illimani made a commitment to supply water to all households in the city by December 31, 2001, and gradually to extend the sanitation services to 90% of these households by 2021. The company therefore had to deal with underprivileged neighborhoods, particularly in El Alto. In 1998, a pilot project was launched in collaboration with the World Bank to identify and test alternative solutions suitable for these low-income neighborhoods.

BACKGROUND

PILOT PROJECT - INITIAL SITUATION

More than 600,000 people live in El Alto, which has an annual growth rate of 9.23%. The average annual income is USD 488 and 73% of the population live under the poverty line in suburban areas. Housing with no legal title is frequent, but the contract provided that Aguas del Illimani could serve only occupants with a deed of ownership.

Water supply

Before the start of the project, less than 50% of El Alto residents benefited from direct access to the drinking water supply. The service had been provided since 1966 by a municipal water board, the Servicio Autónomo Municipal d'Agua Potable y Alcantarillado (SAMAPA). Other households (particularly those involved in the pilot project) had ...

to make do with water vendors, neighbors connected to the mains, rainwater collection reservoirs, private wells, or the nearest stream.

Sanitation service

In 1997, 30% of the inhabitants in El Alto had access to sanitation services. cesspits offered an alternative for 21% of the households. The others used latrines, the nearest stream, public toilets, or the private toilets of their neighbors.

INSTITUTIONAL SITUATION

In 1994, the government set up a nationwide system of regulation on a sectoral basis. For the water sector, the Superintendencia de Aguas is responsible for granting water and sanitation services concessions, for regulating and supervising these concessions, and for approving rates.

THE WATER FOR ALL PROJECT

Institutional and financial set-up

In 1997, the Superintendent approved a concession contract authorizing Aguas del Illimani to take charge of the operations and assume the responsibilities of SAMAPA. The contract is based on the conventional model. Its main objective is to serve all households in the metropolitan area: first, by connecting as quickly as possible a maximum number of households to the water supply, then gradually connecting them to the sanitation system. The El Alto pilot project is part of this program, and is designed to seek a reliable method of serving the most depressed neighborhoods. The aim of the pilot project is to connect, at low cost, 10,000 low-income households to a water supply and sanitation system.

A large range of institutions participates, along with Aguas

del Illimani, in the project's steering and technical committees:

• Local and national authorities. El Alto City Hall, the Local Government of La Paz, the Ministry of Housing and Public Utilities, the Vice-ministry for Public Investment and External Finance, the Water Supervisory Board, and the communities involved in the project.

• Financial backers, the Swedish Agency for Development and International Cooperation, and the World Bank's Water and Sanitation Program.

The budget for the project is USD 5.4 million. It is financed by:

• Aguas del Illimani (USD 4.4 million) for infrastructure extension and social actions;

• The Swedish International Development Agency (USD 903,500) and the WSP-AND (USD 160,000) for technical assistance, institutional support, documentation, and distribution.

To ensure long-term reliability, the project provides for the communities' financial autonomy, the absence of external subsidies, and total recovery of costs. Over the long term, investments will be financed by those connected to the network, and by rate adjustments.

Technical options

El Alto is served by a "condominial" form of water supply and sanitation system. Compared with a traditional network, such systems significantly reduce the cost of household connections and sanitation by using pipes that are smaller in diameter and fewer in number, and laid in shallower

trenches. Under roads, they risk being damaged by the passage of heavy vehicles. Several options are available: pipes can be laid under sidewalks, under housing blocks or at the rear of the blocks. Each block chooses the system it prefers for water supply and sanitation.

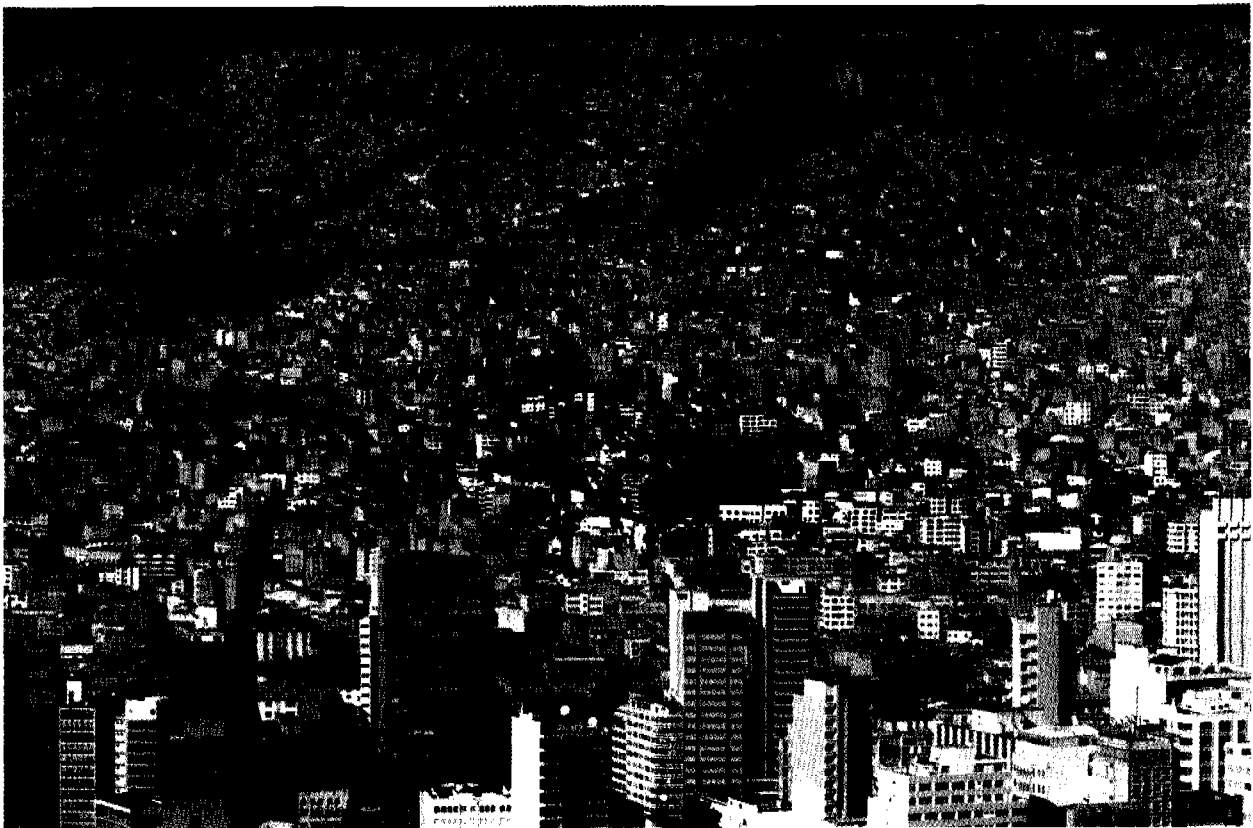
To guarantee the system's endurance, the project provides for participation by members of the community in the network's design and installation. Aguas del Illimani offers to reduce the price of connection to the mains if the future users take part in the connection work, and 80% of households have chosen this option. In addition, Aguas del Illimani allows every household to spread the payment of mains connection expenses over five years, interest free.

The local inhabitants must be trained since each household has to ensure the system's maintenance. Members of the community are responsible for the upkeep of pipes passing under private lots, and Aguas del Illimani is responsible for the mains. In addition to construction work, the project participates in the life of the neighborhood, provides hygiene education programs, and grants small loans to finance indoor plumbing work.

Pricing and payment methods

Each block can choose between three types of billing:

- individual meter readings
- communal meter readings
- a meterless flat-fee payment



At the start of the project, the first option was adopted in most neighborhoods. Communities then expressed the wish to relate their water bills to exact consumption. Individual meters were then installed.

Rates are progressive by block: for 0 to 30 cubic meters per month (the case of most customers), the price is USD .22 per cubic meter per month.

IMPLEMENTATION OF “WATER FOR ALL”

Pilot project phases

1. Preparation (December 1996 – September 1998)

- Collection of funds through outside investors and local participants.
- Launch of a Participatory Rapid Assessment procedure (PRUA) to determine El Alto’s demographic situation and water needs.
- Agreement between the partners establishing the project objectives, the implementation plan, and the communities involved.

2. Implementation (September 1998)

- Training of local and national government personnel.
- Drafting strategies and methodologies for the social and technical initiatives.
- Establishing water and sanitation infrastructure.

3. Hand-over (beginning 2000)

The pilot project was handed over from IPEA to Aguas del Illimani, from now on fully responsible for completion of the community participation systems. Nevertheless, the World Bank’s Water and Sanitation Program continues to be involved in the follow-up and the assessment of IPEA projects (in 6 neighborhoods).

4. Beyond the pilot project

A follow-up and assessment period has been provided in order to evaluate the impact of the project on the communities, and their satisfaction with its various features. A number of indicators have been developed to evaluate the pilot project’s durability.

Social, commercial, and technical review

• Extending the water and sanitation systems by a condominium approach ensures substantial savings in relation to a conventional system: from 10 to 40% for water systems, and from 20 to 50% for sanitation. The savings achieved by delegating work to the community largely compensate the cost of social outreach (5 to 20% of the total cost). From the population’s perspective, the main advantage of shared operational responsibility is reduced connection and maintenance costs.

• The communities have continued to demonstrate their capacity to organize themselves to manage and operate the system more than one year after the departure of the field teams. This reflects genuine success in terms of social outreach and community organization. Long-term follow-up will be required, however, for evaluating the durability of the system, which is made more difficult by the high degree of mobility among the population.

• The impact of hygiene and environment education programs is mitigated: the improvement of household sanitation has been very gradual, and the change in consumption habits and sanitary practices is not as significant as might have been hoped. The impact does seem to be greater among the younger generations, however, which may indicate a radical change in behavior over the long term.

Over and above the direct aims of social outreach work, the pilot project has had considerable impact on community deve-

lopment and communities' abilities to be self reliant and to undertake new projects with the objective of improving their standard of living.

The promising results of the pilot project enabled Aguas del Illimani to envisage extending services to the entire concession area by the spring of 1999. As a result, at the end of 2000, 57,000 low-income households in La Paz - El Alto were connected to the water and sanitation systems, and the commitment to connect the entire population by the end of 2001 will be met.

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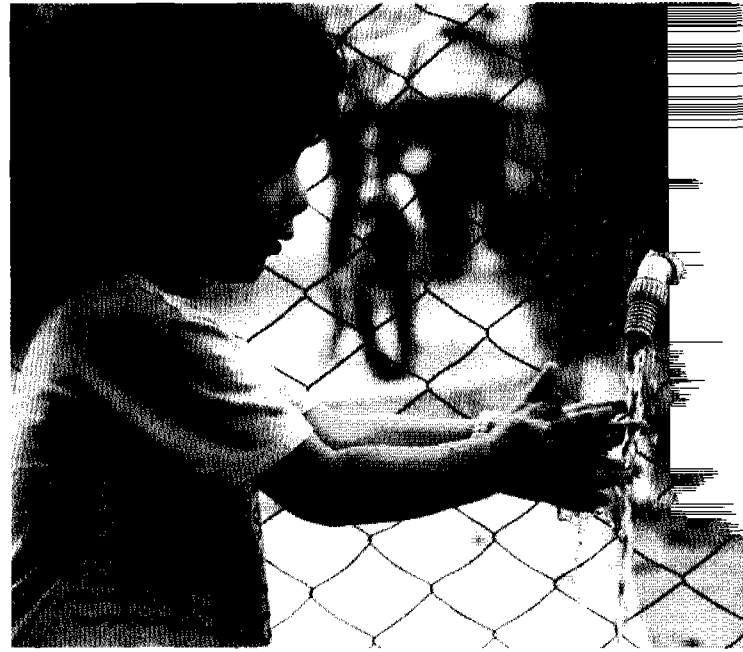
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BUENOS AIRES

800,000 people in poor neighborhoods recently connected to the drinking water system

Buenos Aires has the largest water supply and sanitation concession contract in the world. It was awarded to Aguas Argentinas, a subsidiary of Ondeo Services, after an international call for tender in 1993. In Buenos Aires there are 800 low-income districts with some 2.5 million inhabitants. In order to meet their needs, Aguas Argentinas has set up a specific program that at present has enabled 800,000 people in the districts to be connected to the drinking water system and 120,000 people to the sanitation system.

Accessible in the past to all the inhabitants of Buenos Aires, the water service managed by the city hall has not been able to keep up with the demand caused by rapid urbanization and population growth. The public utility serving greater Buenos Aires, Obras Sanitarias de la Nación, had to cope with serious problems of management and operation, such that the upkeep and quality of the service had seriously declined. In 1993, after an international call for tender, Aguas Argentinas, an international group led by Ondeo Services, was awarded the 30-year concession contract, and began to ensure water and sanitation services for Buenos Aires metropolitan area. The objectives of the concession are to reach a 100% coverage rate for water supply and 95% for sanitation services by the end of the contractual period. One of the challenges facing the Ondeo Services subsidiary is to provide the 2.5 million underprivileged inhabitants of the metropolitan area with access to drinking water and sanitation systems between now and 2023.



BACKGROUND

INITIAL SITUATION

Out of the 10 million inhabitants of Buenos Aires, 3 million live below the poverty line (monthly family income less than US\$ 500), and 800,000 are in a highly precarious financial situation (income less than US\$ 240).

There are three types of underprivileged districts:

- shantytowns (chaotic construction, no drainage or access to services): 250,000 inhabitants
- low-income housing areas (structured habitat but of poor quality, the destination of the relocated from the shantytowns): 250,000 inhabitants
- planned urban areas, but with a low economic capacity: 1,500,000 inhabitants.

In each, the population density is very high (about 10,000 pers/km²), and the neighborhoods are often far from water resources and the existing primary system. The extension of the system to these districts is therefore relatively expensive.

INSTITUTIONAL DIAGNOSIS

Many local development organizations contribute to the cohesion of the communities. Some NGOs are involved in the project (notably IIED-AL, the International Institute for Environment and Development – Latin America). In addition to the concession contract, the government of the province and the local municipalities remain involved in the water services, by helping to finance connection equipment and supplying labor.

CHARACTERISTICS OF THE PROJECT

The objectives of the contract are to achieve a coverage rate of 100% of the population for water supply and 95% for sanitation between now and 2023. The role of the regulatory authority, ETOSS (Ente Tripartite de Obras de Servicios de Saneamiento), is to approve and to supervise the five-year investment plan of Aguas Argentinas, and to define the service price. The total investment for the first 5 years of the contract was US\$ 1.2 billion.

Aguas Argentinas' strategy for poor neighborhoods provides for the following:

- The individual connection of every household to the system.

- ⊗ A major reduction in connection costs

 - Water supply: US \$600 → US\$ 120

 - Sanitation: US\$ 1,000 → US\$ 120

- ⊗ The development of community activities goes hand in hand with the extension of the network. In order to provide and implement solutions suitable for the "Villas Miserias",

there must be active dialogue among the concessionaire, the public institutions and the underprivileged districts. To achieve this, NGOs have been invited to intervene in the field to encourage dialogue among various participants with frequently diverging interests.

- ⊗ A participatory water service, involving the "bartering" of labor in exchange for connection to the network. This concerns small-scale projects (in well-organized communities of less than 3,000 inhabitants,) in a demonetized economic situation.

- ⊗ A program designed to train the company personnel to intervene in sensitive areas: in 2000, some 80 people were trained in communication methods and participatory work in the neighborhoods.

Community structuring work has been carried out in cooperation with NGOs: together with the Fondation Riachuelo, Aguas Argentinas has studied methods of structuring the communities based on "neighborhood units". These groups of about 20 families are designed to be the regulation unit on which negotiations can be based for future activities, such as the construction of sanitation networks, the regularization of property rights, and so on.

In January 2001, Aguas Argentinas set up a participatory form of dialogue, a "forum" to reinforce its links with the community at large, with exchange workshops designed to clearly define the role of NGOs in relation to the private sector. The purpose is to develop a constructive, long-lasting alliance with several NGOs.

REVIEW OF OPERATIONS SINCE 1994

System	Period	Partners	Beneficiaries
Job-generating unit	1994	Private operator	110,000
	1999	Province Community	(5 projects)
Participatory water service	1997	Private operator	30,000
	1999	City Hall Province	(15 projects)
Tax compensation agreement	1995	Private operator	50,000
	1999	City Hall	
Aguas Argentinas Extension	1994	Private operator	540,000
	1999	City Hall Community	
Involvement of NGOs	1994	Private operator	5,000
	1999	NGO City Hall Community	
Cross-subsidies	1996	Private operator	65,000
	1999	Regulator City Hall	
TOTAL			800,000

Since 1993, the percentage of the low-income population connected to water and sanitation systems has risen from 20% to 55%, and has therefore more than doubled. In underprivileged districts 800,000 people have been connected to the public drinking water supply.

Pricing and payment methods

In non-urban areas, where the property ownership of land is not defined, conventional forms of recovery (direct invoicing) are impossible. Specific methods are being used to improve both invoicing and bill recovery.

☛ In sectors where contacts exist between Aguas Argentinas and the inhabitants (neighborhood associations, or in districts recently connected through work by their inhabitants, etc.), collective or bulk invoicing is used, with an intermediary in charge of payment. This method has given very good results.

☛ In districts that are well-organized, but which are too large to be bulk invoiced (more than 1,500 inhabitants and large total invoice amounts), bills can be issued to alleys or groups of 5 to 10 families.

PROJECT IMPLEMENTATION

Objectives of the first five-year plan (1994-1999)

- ☛ Identification of the concession area based on field surveys
- ☛ Classification of districts to be connected according to chosen criteria (organization of sector, size, support of city hall etc.)
- ☛ Selection of the most suitable solutions
- ☛ Selection of NGOs for direct intervention with the communities
- ☛ Launch of specific campaigns designed to improve the distribution and collection of invoices.

The following organizations have taken part in implementing the project:

- The Gerencia de Desarrollo de la Comunidad
- Regional Aguas Argentinas teams

- The technical and commercial managers for Aguas Argentinas districts

Second five-year plan objectives

🌀 Daily technical and commercial management of underprivileged areas

1. Diagnosis and study of the technico-commercial situations in underprivileged areas

2. Developing and assessing alternative technical and commercial solutions for the management of these districts.

🌀 Support for extension works

1. Coordinating the development of extension works by involving all stakeholders, including the town authorities and the future beneficiaries of the service

2. Developing communication tools and participatory workshops for future customers

3. Developing and assessing communication procedures before, during, and after the work

🌀 Training for field personnel: training in the area of direct communication with customers.

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SOUTH AFRICA

Water supply for rural and peri-urban communities

Thanks to an innovative public-private partnership, South Africa is not only rebuilding its water and sanitation system, but is doing it in a sustainable way. The partnership, known as Build, Operate, Train, and Transfer (B.O.T.T.), was launched in July 1997. It is based on the principle that sustainable management is only possible by actively involving national and local authorities at every stage in the development and management of the services. It is the first known example of large-scale involvement of the private sector in the water supply and sanitation of rural areas in developing countries. The program, implemented by a subsidiary of Ondeo Services, involves 2,200,000 people.

Between 12 and 18 million people in South Africa have no regular or safe access to drinking water or adequate sanitation facilities. Four-fifths of these underprivileged people live in four rural regions: the Eastern Cape province, KwaZulu/Natal, Mpumalanga, and the Northern province.

In its Reconstruction and Development Program (RDP), the new Government set an objective to give access to drinking water to the entire population within the next 10 years. To achieve that goal, the DWAF (Department of Water Affairs and Forestry) has implemented a new type of partnership with the private sector: the BOTT (Build, Operate, Train, Transfer). Ondeo Services, through its subsidiary WSSA (Water and Sanitation Services of South Africa), manages two of the four consortia dedicated to this project: Amanz'abantu in the Eastern Cape province and Metsico in the Northern province.



BACKGROUND

PROJECT – INITIAL SITUATION

✿ EASTERN CAPE PROVINCE

The environment is rural and arid, with a very low population density (37 pers/km² for the entire province). Housing is permanent and easily accessible, but distances isolate some villages. These remote communities lack the basic infrastructures (electricity, roads, water and sanitation, etc.).

Water supply

Water supply systems are non-existent. More than 66% of the 6.3 million inhabitants living in this region have no access to drinking water. People draw water from rivers, small lakes or, on rare occasions, use hand pumps. The lakes are frequently soiled by cattle. Rainwater is used for cleaning.

Sanitation service

There is no formal service, and many people use cesspits.

✿ NORTHERN PROVINCE

In most cases, the environment is peri-urban. Most housing is permanent, and recently constructed thanks to the Reconstruction and Development Program. The areas concerned by the projects belong to the former homelands, where the development of infrastructures was very slow. The household income growth rate is flat, indicating that there is no hope of cross-subsidies as in megacities where rich and poor coexist. The entire water service policy is built around *underprivileged populations*.

Water supply

The DWAF is currently responsible for the operation of a vast and complex water supply system. Customers are individually connected (those nearest to treatment plants), or supply themselves at water standpipes. The quality of the service is generally very bad, due to the lack of adequate logistic resources. The unpaid invoice rate is traditionally very high (99% in certain areas). Precedents of service and payment boycotts in the region of Vondo make bill recovery very difficult.

Sanitation service

There is no formal service, and many people use cesspits.

INSTITUTIONAL DIAGNOSIS

Governmental structures and policies are undergoing major upheavals. Since 1994, the administrative organization and water policies have been subject to radical change. Numerous quarrels in every community occur between the traditional chiefs, who are opposed to paying for water and sanitation services, and the town councillors.

At the local level, no institution is yet capable of providing a water supply service. Ultimately, one of the objectives of the BOTT is to help build the capacity of local water services

(the Water Supply Authorities, WSA), in order to decentralize their management.

PROJECT CHARACTERISTICS: THE "ONE-STOP SHOP" CONCEPT

Institutional and financial structure

The BOTT program encompasses projects based on contracts, including both the development of infrastructures and the management of facilities. It features a partnership between the DWAF and a private consortium, called the PIA (Program Implementation Agent), and involves the community and the local authorities. Its objective is to combine the skills of the private sector with the aims and financial capabilities of the public sector (financing is provided by the DWAF and the European Community).

The private consortium is involved throughout the life cycle of the project. It is responsible for the four following phases typical of a BOTT contract:

- ① Building the network
- ② Operating the network
- ③ Training the community (in the Eastern Cape province and in the Northern province water service) in system management and maintenance
- ④ Transferring responsibility for the system to a local institution.

The private consortium must therefore have a multidisciplinary approach, and be present at every level of the project. Through service providers, which it coordinates and whose quality of work it guarantees, the PIA works in 5 areas:

- Project design. Preliminary feasibility study, system scheduling, technical options
- System construction

• • •

- System operation and maintenance (O&M)
- On-site sanitation. Implementation of sanitation services not connected to the network
- Institutional and social development. As an interface between the consortium and the local population, its role is to ensure that the project is fully integrated into the community.

The “one-stop shop” model nevertheless remains highly flexible. The range of tasks assigned to the private consortium can vary from one project to the other, or even evolve during a given project. The model is suited to situations in which the commercial risks would dissuade the private sector from any commitment. The private consortium is indeed paid directly by the Government for the services it provides and not by the users through a price rate.

Technical options

- In the Eastern Cape province, Amanz’abantu installs pre-pay standpipes in the least remote villages. Elsewhere, it uses conventional standpipes, as well as boreholes or spring tapping, which may or may not be connected to a water supply system. Boreholes can be provided with electric, diesel, wind, or hand powered pumps.
- In the Northern province, the private consortium has developed new approaches based on hygiene education of the communities.

In areas with no sewer-based sanitation systems, Metsico installs enhanced ventilated latrines.

Pricing and payment methods

- In easily accessible rural areas equipped with standpipes (Eastern Cape), WSSA provides two payment options:
 - Fixed flat-fee identical for all consumers
 - Electronic prepayment by smart card in the least isolated

villages.

- For areas equipped with faucets in courtyards or inside the home (Northern province), the solution chosen is an individual connection with a meter, and centralized invoicing.

In the Northern province, WSSA uses service contracts in order to delegate the collection of invoices to communities and customers.

PROJECT IMPLEMENTATION

Due to the diversity of socioeconomic and institutional situations, a different operational and institutional set-up is implemented in each province.

• EASTERN CAPE PROVINCE

1. Creation of a local organization with the main stakeholders: the Project Steering Committee (PSC), which must immediately demonstrate its commitment, notably by collecting initial working capital.
2. Training of the local community solicited at the time of construction, and then training of the future users two months before the transfer of responsibilities.
3. The PSC becomes the Village Water Committee (VWC), in charge of operation of the network and of bill collection. WSSA remains present as a technical support and monitoring body.
4. As soon as the DWAF is ready to transfer the system, the VWC becomes the local distributor and the source of financing.

• NORTHERN PROVINCE

Because of the complexity of the network, the operation cannot be transferred quickly to a VWC. WSSA has therefore set up a local approach:

1. Evaluation of the emergency services that can be carried

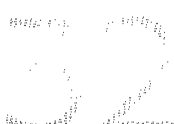


Table 1:
Amanz'abantu, Eastern Cape province

Description	July 1997	January 2001
Population served by rehabilitated system	None	400,000
Additional population population served	None	300,000
Total	None	700,000

Table 2:
Metsico, Northern province

Description	July 1997	January 2001
Population served by rehabilitated system	500,000	600,000
Additional population population served	None	1,000,000
Total	500,000	1,600,000

out to operate the existing network and the work required to improve and extend it. An awareness campaign aimed at communities, in order to improve the recovery rate (broadcast debates etc.)

2. Assistance to the DWAF related to O&M problems and recovery (12 months)

3. If the local Council is not ready to take over, WSSA remains involved in the operation of the network through a management contract. A tripartite agreement is entered into by and between the DWAF, Metsico, and the local VWC: the responsibility for costs is gradually transferred from the DWAF to the VWC over a period of 6 to 8 years.

WSSA analyses show that the level of satisfaction among the local population is variable. The same supply system can be a success in one community, and turn out to be less efficient elsewhere.

Since the project is still in its early stages, it is not possible to assess its long-term viability. On the other hand, BOTT' programs that are underway seem promising, like the El Niño program launched and rapidly implemented at the end of '97 by Amanz'abantu. In June 98, more than a 100 wells were constructed or rehabilitated, ensuring the supply of water

to 300,000 people threatened by drought. WSSA immediately took charge of the operation and maintenance of the wells, while the DIS set up the Village Water Committees. The Committees now operate the system themselves, and efficiently collect the payments.



* * *

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