

suez

BRIDGING THE WATER DIVIDE



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THE “WATER TRUCE”*

AN OPEN LETTER

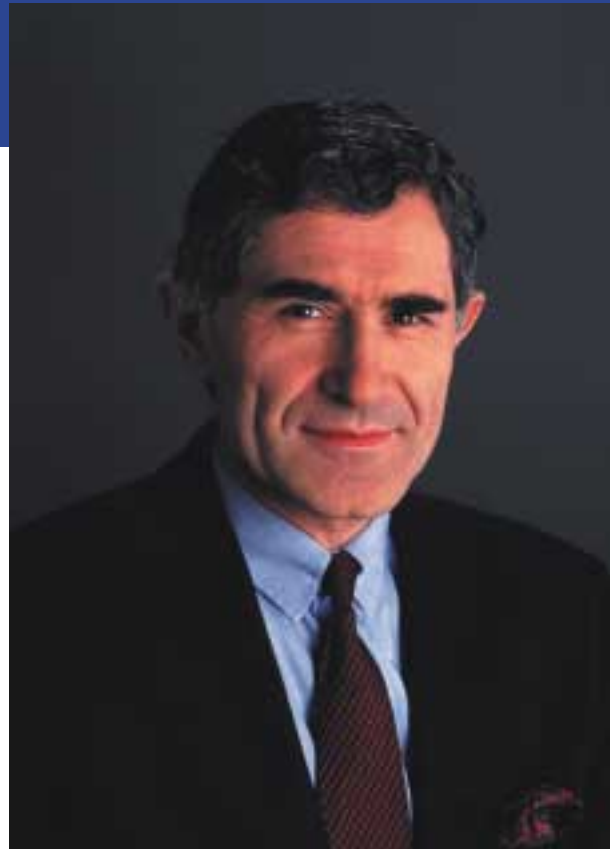
*Rudyard Kipling: The Second Jungle Book

For many of the world’s populations, the last century was one of important progress that brought great improvements to the quality of life. For many more, however, it was an age of economic continental drift that deepened the gulf between rich and poor countries, perpetuating unacceptable living conditions and diminishing hopes for change. It is high time to close this chasm, not only to provide hope for millions of people and to foster economic development around the world, but also to improve global understanding. Access to water is a fundamental issue that must be resolved in order to make this happen.

Solving the world’s water problems is much more than a technical or financial undertaking. Before the technical and financial aspects can even be addressed, we must reconcile a range of widely divergent economic and ideological viewpoints. We must find new answers and new forms of solidarity by stimulating and maintaining active global dialogue at all levels. At SUEZ, we want to contribute constructively to opening this dialogue and ensuring that it moves ahead.

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 who benefit from drinking water diminish every day? Why does the development of networks for drinking water and waste water treatment 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



Gérard Mestrallet, Chairman and Chief Executive Officer, SUEZ

know-how that we should be applying to this task are stymied by 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 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 up widespread misconceptions. In providing our services, we support 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

“

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

”

with local authorities, using fixed infrastructure. Moving water out of the service area, 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, not the price of water as a raw material.

I think we should be able to agree that the public sector must retain ownership 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 framework 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, in cities including Casablanca and Buenos Aires, we have invested nearly US\$ 2 billion 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 less you

get in terms of quality. I am particularly proud of the fact that our programs 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. Still, the public-private partnership model has unquestionably 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. US\$ 180 billion 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 public official's role. Initiative and control are the responsibility of the public authorities, implementation and management that of the private sector: this 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 effort 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 10 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 funds, 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, and Gaza, as well as many other locations.

In Buenos Aires over the last eight years we have connected 1.6 million people to the drinking water network and nearly one million to a sewage system. The water service charge is still less than when the contract became effective. In the same way in La Paz, Bolivia, all the residents had access to drinking water at the end of 2001, while only 60% had 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 construction work, with the backing of efficient local Non Governmental Organizations. 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 infinitely better.

These outcomes are encouraging, but they are far from meeting today's needs. Progress 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 about 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, and food. How can we do this if we do not first tackle the water issue, which remains the essential condition for finding sustainable alternatives to poverty?

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 every one of us to declare a "Water Truce". Opposing economic and ideological standpoints need to be reconciled so that they cease to be so very detrimental to the interest of the underprivileged around the world. This will be possible only 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 to governments, members of parliaments, and international institutions around the world.

Gérard Mestrallet

THE SUEZ WATER RESOURCES ADVISORY COMMITTEE

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

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.”



The reasons for the WRAC

SUEZ created the WRAC as part of its commitment to be a responsible corporate citizen. This is of particular importance given the nature of the SUEZ business: delivering the essentials of life – energy, water 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 the particular organization that a member belongs to.

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 working groups which focus on topics chosen at the end of each session.



LATEST MEETING IN PARIS - AN EMPHASIS ON COMMUNICATION

Highlights



Since February 2000, WRAC members have met twice a year in cities as varied as Barcelona, Buenos Aires, Casablanca, Macao, and Paris.

Each meeting has generated a strong message:

- The WRAC emphasized the importance of the messages from the community and NGOs;
- It recognized the ability of public/private partnerships to provide water services to urban populations, including the most under-privileged;
- Finally, and above all, it suggested to SUEZ that it should take a public part in international debates in order to share its know-how and testify on the concrete progress which can be made on the field. That is the purpose of this brochure and of "Bridging the Water Divide."

This campaign received very positive feedback among chief decision-makers in governments and international organizations across the world. Several of them asked to meet with SUEZ as early as the fall of 2001 so as to have a better understanding of the problems faced in the field and to identify effective solutions.

SUEZ also participated in a series of bilateral discussions with organizations such as governments, institutions and NGOs as well as in debates at the international level. One highlight in 2002 was the World Summit on Sustainable Development (WSSD) in Johannesburg in which the Group was strongly involved.

The Johannesburg Summit saw the problems tied to water access and sanitation finally gain the adequate level of attention

at the international level alongside such other priorities as health, energy, agriculture and biodiversity. In effect, the international community was able to define specific objectives regarding a timetable and the population most in want of water and sanitation services. Sanitation was also added to the list of Millennium Development Goals which had been defined in 2000 at the behest of the United Nations.

All in all, several events during the year 2002 were particularly constructive on the matter of improving access to drinking water and sanitation. This momentum needs to be maintained in 2003, particularly during the Third World Water Forum held in Kyoto in March.

The WRAC therefore encourages SUEZ to pursue its efforts, most notably by:

- Fostering cooperation with all stakeholders and further improving communications during each phase of a project's conception, implementation and management ;
- Increasing the number of partnerships with universities ;
- Devising practical solutions to achieve the Millennium Development Goals.

As a major economic player possessing proficiency, know-how and resources in the fields of energy, water and waste, SUEZ will keep on contributing to the sustainable development of all populations concerned.



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
Ms. Fatma ABDEL-RAHMAN ATTIA	<i>Egypt</i>	Doctor in Hydro-geology, Director of the Egyptian Research Institute for Ground Water, Head of the Resources and Environment Department
M. Mohamed BENBLIDIA	<i>Algeria</i>	Engineer, Professor, President of the Mediterranean Water Institute
M. Ramesh Kumar BHATIA	<i>India</i>	Economist, Professor and Consultant, member of the Global Water Partnership
Ms. Laurence BOISSON de CHAZOURNES	<i>France</i>	Professor of Law at the University of Geneva
M. Adil A. BUSHNAK	<i>Saudi Arabia</i>	Professor and Consultant, Supreme Economic Council
M. Jose Bernardo CABRAL	<i>Brazil</i>	Senator, Attorney, 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
M. Madhav A. CHITALE	<i>India</i>	President of the South Asia Technical, Advisory Committee of the Global Water Partnership
M. Manuel CONTIJOCH-ESCONTRIA	<i>Mexico</i>	President of the Irrigation and Drainage Commission of Mexico, Consultant
M. Michel DESBORDES	<i>France</i>	Hydrologist, Professor at the University of Montpellier II
M. Alfred DUDA	<i>United States</i>	Hydrologist, Biologist, Global Environment Facility
M. Jose-María FLUXA	<i>Spain</i>	Professor at the University of Madrid, President of the Foro de Agua, comprising specialized Spanish water engineers
M. Namik KILIC	<i>Turkey</i>	Consultant, Public-private partnership specialist
M. Cosimo LACIRIGNOLA	<i>Italy</i>	Advisor, President of the Mediterranean Agronomy Institute, Ministry for Agriculture staff member
M. Guy LE MOIGNE	<i>France</i>	Advisor, Consultant to the World Bank
M. 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
Ms. Houria TAZI-SADEQ	<i>Morocco</i>	Lawyer, Professor and Consultant
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 private 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 B.O.T. contract (Build, Operate, Transfer), the operator finances, builds, and operates the new facilities for drinking water production, wastewater or sewage treatment; the B.O.T. 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 Left Bank)

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: Indianapolis)

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	B.O.T.	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 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 1.7 billion in developing infrastructure. This is a yearly rate 18 times higher than before 1993, generating numerous new jobs for suppliers and subcontractors.

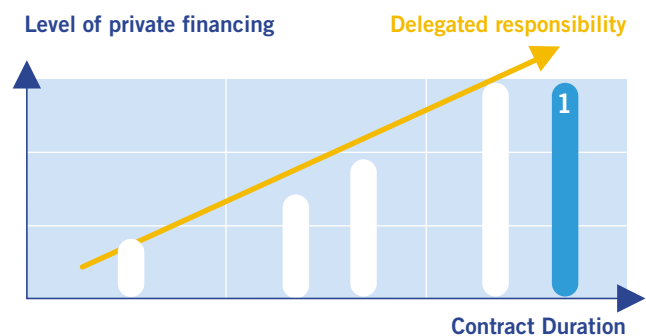
Notable results include:

- a 38% increase in drinking water production capacity, thus ending summertime water shortages;
- the extension of drinking water systems, enabling over 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 satisfaction ratio of 70%.

These rates have been maintained since the economic crisis, showing the importance and quality of water service for the population.

The basic price of water continues to be 4 % below that applied prior to the award of the concession. The cost of the service is among the lowest in Latin America: 14 cents/ m³.

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



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:	Aguas Argentinas
Shareholding:	35.59%
Contracting entity:	The Federal Government of Argentina
Start of contract:	April 1993
Contract duration:	30 years
Employees:	3,754
Population served:	Approx. 10,000,000
Total investment:	US\$ 1.7 billion



MULTI-SERVICES WATER, SANITATION, AND ELECTRICITY CONCESSION CONTRACT

Casablanca (Morocco)

The delegated management contract in Casablanca provides for an investment plan of some US\$ 3 billion over 30 years, approximately US\$ 338 million of which have already been invested. The contract covers drinking water distribution and sanitation services for 27 municipalities (4.5 million people) and electricity supply.

With 35% ownership, Ondeo 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 of the previous public water board.

Results

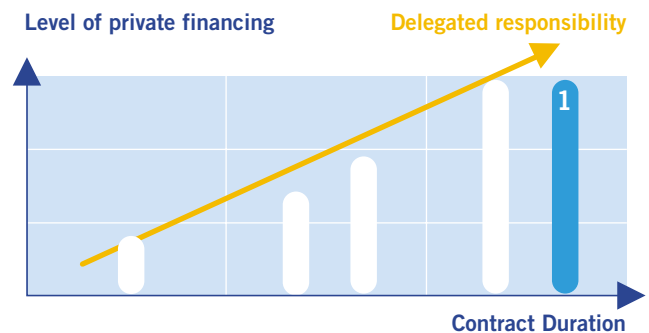
● ● ●
Flooding after storms, which periodically destabilized the city's economy, has been eliminated following a major pipeline cleanout campaign, and the opening in November 1999 of a diversion tunnel for the principal sewer in the urban area. In all, US\$ 117 million have been invested in sanitation 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 26 million cm in 2002. This is the equivalent to the annual water consumption of 850,000 people.

Customer satisfaction for the quality of Lydec services rose from 50% in 1997 to 93% currently, thanks in particular to improvements in the quality and number of customer centers.

More than 280,000 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: 3,317

Number of connections: 594,508 for water
641,653 for electricity

Total investment: US\$ 338 million in total, of which US\$194 million by Lydec



DRINKING WATER PRODUCTION B.O.T. CONTRACT

Johor Bahru (Malaysia)

In July 1992, the government of the State of Johor entrusted Equiventures Sdn.Bhd. with the contract for modernization, financing and operation of the installations for drinking water production and supply to 900,000 inhabitants of the Johor Bahru district.

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

Results

From a technical point of view, the installations have been modernized and their capacity extended from 182,000 cubic meters per day originally to 136,000 additional cubic meters at the end of 1993 (phase 1, extension of the existing production plant), and 159,000 additional cubic meters per day at the end of 1995 (phase 2, construction of a new plant). Capacity will be further increased by 159,000 cubic meters per day at the end of 2003 by a new extension (phase 3).

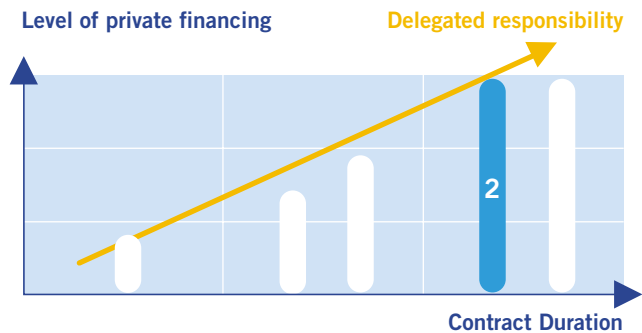
The operation of the stations, reservoirs, and drinking water networks (40 km of large diameter) is handled by a joint stock company managed by Ondeo.

The installation of a water resources management tool has enabled a significant improvement in the power efficiency of the installations and the management of climatic risks such as El Niño, whose appearance in 1997 provoked a drought in 1998.

The Equiventures contracting company has met and even exceeded all the objectives laid down in terms of quality and quantity of water.

Part of the private partner's role was to carry out technology transfer. Intense training programmes were set up to develop

local management capabilities: operational management is now entirely handled by Malaysian personnel.



Responsibility of private operator:

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

Ondeo subsidiary:	Equiventures Sdn. Bhd.
Contracting entity:	Government of the State of Johor
Start of contract:	July 1992
Contract duration:	20 years
Employees:	71
Total investment:	US\$ 175 million (total cost of phases 1 and 2), and US\$ 50 million (phase 3 in progress)



WATER DISTRIBUTION AFFERMAGE CONTRACT

Paris Left Bank (France)

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

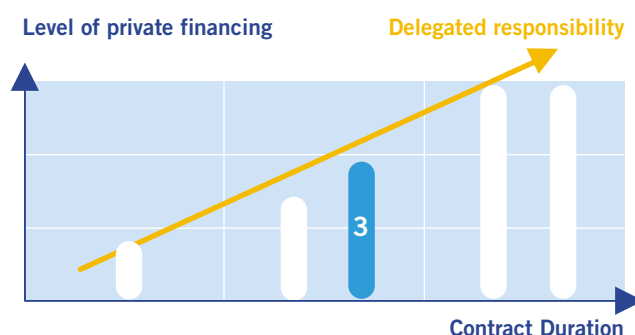
Results

Lyonnaise des Eaux France's objectives in Paris are:

- Economic efficiency. The company manages the system with a headcount of 84; the cost of water distribution represents only 19% of the total price of water and sanitation services.
- Technical efficiency. Since the contract entered into effect, almost 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. Lyonnaise des Eaux France 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 nineteen years, 280 km of mains representing 48% of the entire length of the network have been rehabilitated.

In the Ile-de-France region, Lyonnaise des Eaux France 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:	Lyonnaise des Eaux France (Parisienne des Eaux)
Shareholding:	100%
Contracting entity:	City of Paris
Start of contract:	1985
Contract duration:	25 years
Employees:	84
Population served:	750,000 (night) 1,500,000 (day)
Number of connections:	27,720



WASTEWATER COLLECTION AND TREATMENT O&M CONTRACT

Indianapolis (Indiana, USA)

The company White River Environmental Partnership (WREP) has managed the two water treatment plants of the city of Indianapolis since 1994, and after a call for tender issued by the city in 1996, won the contract to operate the rain and waste water drainage system. In 1997, the two contracts were renewed for 10 years.

WREP is 52% owned by IWC Resources, parent company of Indianapolis Water Company. The other 48% are owned by SUEZ, directly and through its wholly-owned subsidiary United Water.

The public-private partnership is a success on several levels:

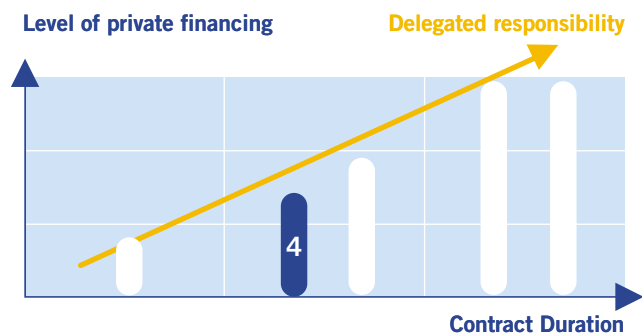
- To date, over 100 million US\$ of savings have been made by the municipality, exceeding initial forecasts. This has enabled it to stabilize prices, repair and refurbish networks, and invest in infrastructures.
- The 207 WREP employees have received over 10,000 hours of training, various performance-related bonuses and rewards, and have more advantageous contracts than their colleagues who are city employees. They also have a personal development programme which enables them to draw up and carry through individual career plans.
- Personnel safety has been considerably improved: the accident rate has fallen by 88% since the start of the contract.

Consequently, cooperation between unions and management has very noticeably improved, as witness the drastic reduction in complaints recorded since the intervention of WREP.

- Quality of service has also improved, despite increased pollution levels of resources.
- WREP also plays an important role with local communities. In addition to its extensive participation in local

activities, WREP has oriented 24% of its purchases to companies managed by minorities or by women.

Finally, as with any true partnership, WREP maintains a constant dialogue with the local community, via an Environmental Round Table composed of 24 environmental and local organizations.



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

Ondeo Subsidiary:	United Water Services
Contracting entity:	City of Indianapolis
Start of contract:	1994
Contract duration:	14 years
Employees:	207
Population served:	800,000
Number of connections:	250,000



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 (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 greater 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.

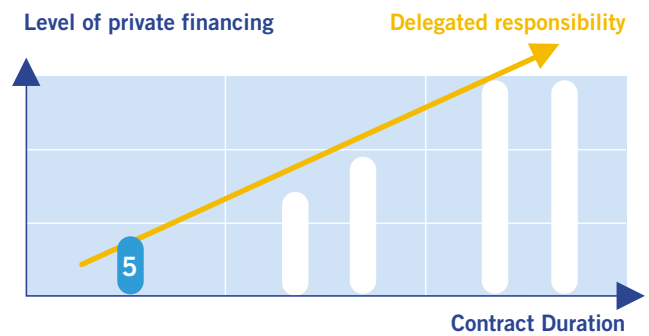
Leaks have been repaired at a rate of up to 250 to 300 per day, and the lead-times for interventions have been considerably reduced from 3 days to 6 hours on average.

An completely new information system for customer management has been 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 has been launched to repair and replace water meters (170,000 new meters installed).

Annual water losses have been reduced by about 6 million m³, which helps in coping with the major demographic growth of the capital.

Each year, Ondeo provides about 18,000 hours of training for the personnel of the water and sanitation company. Given the good results shown, the Water Authority of Jordan has asked LEMA to extend its contract until the end of 2004.



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 for drinking water 75,000 for sanitation
Population served:	1,700,000



WATER AND SANITATION SERVICES MANAGEMENT SUPPORT CONTRACT

Federal district of Mexico City (Mexico)

Mexico City and the surrounding area, with 22 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.

Ondeo owns and operates 2 companies: TECSA, which has been assigned the southeastern zone of the Distrito Federal, where the population tends to have a low income level (2.8 million inhabitants), and IACMEX, taken over by Ondeo in 2002, which manages the central part of Mexico City, essentially residential (2 million inhabitants).

The operations of these two companies are both technical and commercial:

- 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 on behalf of the CADF, customer reception

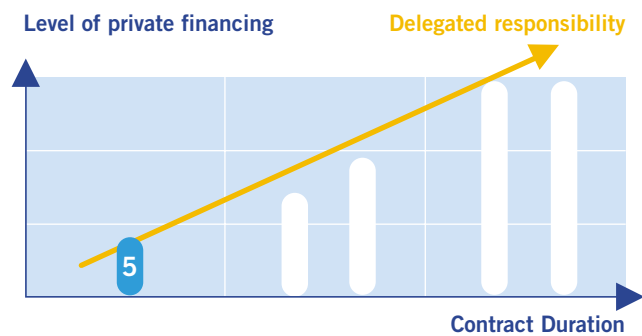
Results



Efforts initially focused on the installation of meters. To date, over 635,000 new meters have been installed, and most of household meters are now read remotely. Eleven public reception centers have been set up. Operating profits transferred to the City Hall, which were initially low, have grown considerably, by about 300% between the two companies.

The second focus was on reducing leaks. In 7 years, over 23,600 have been detected and repaired, and over 74,000 domestic connections have been replaced.

Refurbishment of the secondary water network is also an important activity, with a total of 560 km replaced, involving the change of almost 3,800 valves.



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 and IACMEX
Shareholding:	49% directly TECSA and 50% IACMEX indirectly
Contracting entity:	Distrito Federal via CADF
Start of contract:	1993
Contract duration:	10 years
Population served:	4,800,000
Number of meters installed:	635,400

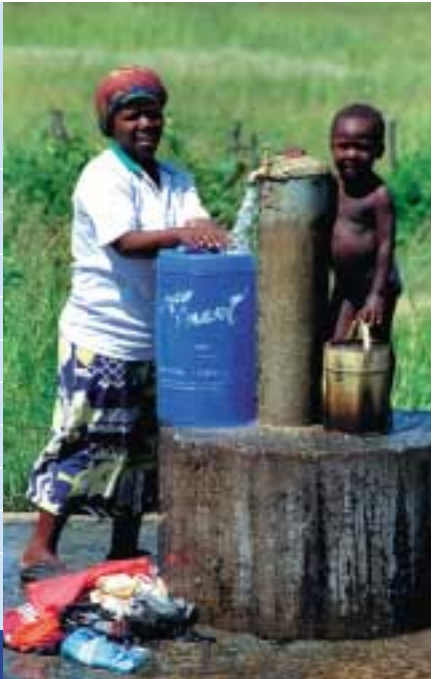
WATER AND SANITATION FOR ALL

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 and sanitation for All", designed to implement the best suited approach for each situation.

CITY	Total population (thousand)	underprivileged people served ⁽¹⁾ (thousand)
Buenos Aires (Argentina)	11,800	1,200
Casablanca (Morocco)	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	8,721



In only a few years, millions of inhabitants have benefited from access to water and sanitation 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.

WATER FOR ALL IN THE POOR SUBURBS



In July 1997, Aguas del Illimani, a subsidiary of Ondeo, 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. Five years later, 74,800 water connections and 55,600 wastewater connections had been made, thus bringing water and sanitation services to more than 460,400 and 333,500 inhabitants respectively. This raised the global coverage for drinking water supply to 100% of the population and for wastewater services to 71%, compared with 68% and 50% five 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) 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 500,000 people live in El Alto, which has an annual growth rate of 9.23%. The average annual income of a family is less than US\$ 500: 67% 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. 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 was part of this program, and is designed to seek a reliable method of serving the most depressed neighborhoods. The aim of the pilot project was to connect, at low cost, 10,000 low-income households to a water supply and sanitation system.

A large range of institutions participated 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, US\$ 5.4 million, was financed by:

- Aguas del Illimani (US\$ 4.4 million) for infrastructure extension and social actions;
- The Swedish International Development Agency (US\$ 903,500) and the WSP-AND (US\$ 160,000) for technical assistance, institutional support, documentation, and distribution.

To ensure long-term reliability, the project provided 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

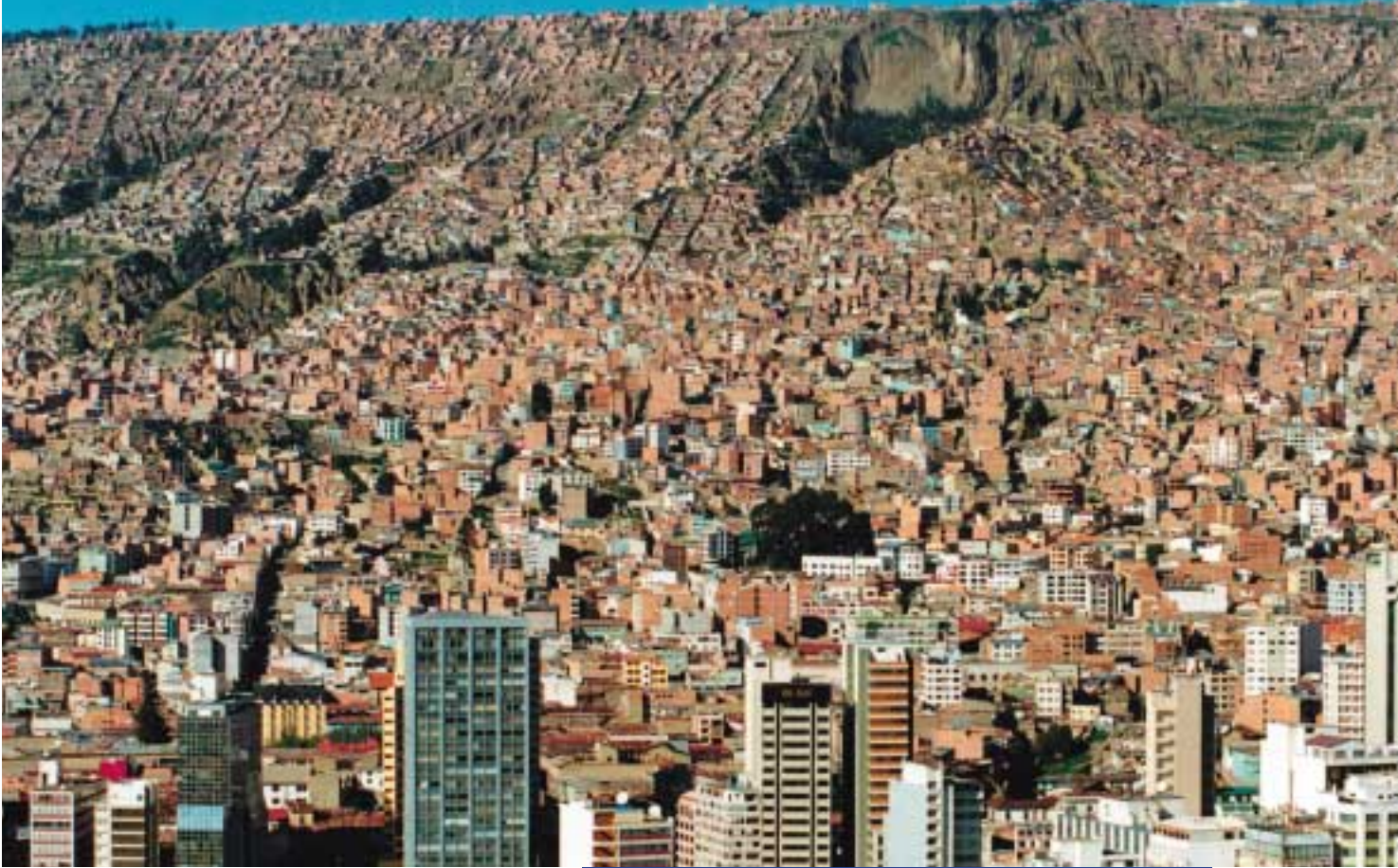
El Alto is served by a "condominial" form of water supply and sanitation system. Compared with a traditional network, such systems significantly reduce the cost of household water and sanitation connections by using pipes that are smaller in diameter and fewer in number, and laid in shallower trenches. Under roads, they risk being damaged by the passage of heavy vehicles. Several options were available: pipes laid under the sidewalk, 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 participated in the life of the neighborhood, providing hygiene education programs, and granting small loans to finance indoor plumbing work.

Pricing and payment methods

Each block could choose between three types of billing:



BOLIVIA: LA PAZ

- 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 their wish to relate their water bills to exact consumption even if it increased the price to be paid. 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 0.22 per cubic meter.

Implementation of “water and sanitation 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 development and communities' abilities to be self-reliant and to undertake new projects with the objective of improving their standard of living.

The positive 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 2001, 65,000 low-income households in La Paz - El Alto were connected to the water and 45,000 to the sanitation systems, and the commitment to connect the entire population by the end of 2001 has been met.

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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, 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 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.

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.

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: from US\$ 600 to US\$ 120
Sanitation: from US\$ 1,000 to 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 between 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.

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

1. Daily technical and commercial management of underprivileged areas:

- Diagnosis and study of the technico-commercial situations in underprivileged areas
- Developing and assessing alternative technical and commercial solutions for the management of these districts.

2. Support for extension works:

- Coordinating the development of extension works by involving all stakeholders, including the town authorities and the future beneficiaries of the service
- Developing communication tools and participatory workshops for future customers
- Developing and assessing communication procedures before, during, and after the work

3. 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, 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 B.O.T.T. (Build, Operate, Train, Transfer). Ondeo, 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

B.O.T.T. 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 B.O.T.T. 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 B.O.T.T. contract:

- Building the network
- Operating the network
- Training the community (in the Eastern Cape province and in the Northern province water service) in system management and maintenance
- 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



SOUTH AFRICA: SPRING WATER IN PERI-URBAN ZONE

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.

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

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 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.

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

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 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, B.O.T.T.' 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.

References, additional information



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