THE REAL OBSTACLES TO UNIVERSAL ACCESS TO THE WATER SERVICE IN DEVELOPING COUNTRIES

Thoughts stemming from the experience of access to drinking water of the poor neighbourhoods populations living in Port-au-Prince (Haiti) and Buenos Aires (Argentina).

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Summary

The purpose of this article is to provide a retrospective analysis of two drinking water access programs, for the populations living in poor neighbourhoods of (1) Buenos Aires (Argentina) and (2) Port-au-Prince (Haiti). Stemming from an analysis of both experiences, with quite different development structures, and of the management models introduced (giving new momentum to the State-owned company in the case of Haiti and building a public-private partnership in the Argentine experience), the authors reflect on the real stakes behind these initiatives.
The nature of the operator is not the main factor in determining the success of these actions. On the contrary, one should move away from an ideological debate in order to focus on analyzing these projects' success conditions: political will, quality of the partnerships and, last but not least, the degree of professionalism of the players in the industry and in this type of neighbourhoods. These are parameters which, once they have been taken into account, should provide a new momentum to the possibilities of the poorest populations to gain access to the basic urban services and allow for these experiences to be replicated, in spite of their contextual differences.

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Introduction

Universal access to water and sewage services is one of the major challenges of the 21st Century. The principle of a compulsory universalisation of water and sewage services has been obvious for the past two decades as we can see from the records of the industry.

In the 1980s, the United Nations had already defined, as one of the goals for the decade, the universal access to the service: "Water for all", in a public aid to development program. The disappointing results achieved have probably had an impact on the promotion, during the 1990s, of the participation of the private sector in a new type of program: the "public-private partnership" (PPP), which also aims to improve the access of all to the water service. By the end of the 1990s there was a strong questioning of the PPP model, whereby many contracts have been cancelled[1], as well as the absence of new projects of this kind for the past three years or so.

This quick overview allows us to underline the present stalemate showing that, after more than twenty years of large-scale experiences of the different solutions proposed, these are at stake, without seeing an alternative capable of replacing the existing models (public management or public-private partnership). In spite of this status of affairs, the same declarations crop up forum after forum, convention after convention, just like the one at The Hague in 2000, suggesting to reduce by half the number of people who do not have access to these services by 2015. However, these proposals are never accompanied by a serious study, which seems today to be the *sine qua non* condition to launch the process again. It is true that we have, in the history of development and cooperation of these past fifty years, few successful experiences, examples of projects which have achieved a significant level of results in terms of coverage of services and sustainability indicators.

The need to place the analysis beyond ideology has led us to choose two programs which achieved significant results over the past ten years: one with the public utility, the Centrale Autonome Métropolitaine d'Eau Potable (CAMEP)[2], in Port-au-Prince, Haiti, and the other one as a public-private partnership, with Aguas Argentinas, a branch of SUEZ Environnement, in Buenos Aires, Argentina.

In both cases, the company tried to solve the problem of providing access to the services to the poor populations stemming from different rationales, each of them suggesting solutions which seem to provide a sustainable answer to the problem posed.

The comparative analysis of the difficulties encountered and the solutions suggested in the framework of these programs allows us to cast a different light and – so we hope – a new one on the development programs involved. In choosing two totally different experiences, we have tried to identify the specifics of each model, to understand if their respective nature encompassed intrinsic difficulties to the solution of the problem or if, on the contrary, each of them brought about an added value – inherent to the model – allowing us to provide for sustainable answers to the question of providing water to the poor neighbourhoods.

Stemming from the work carried out in the neighbourhoods, the purpose of this paper is to try to give a bottom-up vision, i.e. from the field towards the theory, in order to identify the different dimensions of the challenge posed by giving access to water to the poor neighbourhoods of the largest cities of the developing world.

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[1] For the Vivendi Group: Cochabamba in Bolivia, Tucumán in Argentina, for the Azurix-Enron Group: province of Buenos Aires in Argentina, for the Suez Group: Manila in Philippines, for Aguas de Bilbao: Punta del Este in Uruguay, for Aguas de Barcelona: Barranquilla in Colombia.

[2] Translator's Note: Autonomous Metropolitan Drinking Water Facility

After introducing the different contexts in which both experiences take place, the paper addresses the terms of reference and the strategies followed by the water operators. Finally, it provides and in- depth and comparative analysis of their results.

I. Contexts of the projects

1.1 Port-au-Prince:

68% of the urban population lives in poor neighbourhoods, and only 5 % have a conventional access to water

Port-au-Prince, Capital of the first independent black republic in the world (1804) gathers today almost 30% of the Haitian population or close to two and half million inhabitants. Whereas some of its neighbouring cities on the Latin American continent may be considered as "beacon" cities, representing "modernity" (Dollfus, 1994), Port-au-Prince on the contrary gives the impression of a "sunken" city tantamount to chaos.

The spatial and demographic extension of the Haitian capital poses acute problems in terms of accommodation, services, infrastructure or hygiene. The infrastructure, created to support a population of 100,000 inhabitants in the first half of the 20th Century, can not provide a proper response to the needs of a capital city with more than two and half million people, almost 68% of which are living in the so-called "poor" neighbourhoods. These neighbourhoods are not located at the outskirts of a residential downtown or at a specific location inside the city. They are scattered throughout the town, pegged almost everywhere to the residential neighbourhoods.

Table No. 1 – Spatial and demographic importance of the slums of the five municipalities of the metropolitan Port-au-Prince area.

Slum area	*Surface (in ha)*	*% **	*% ***	*Population*	*% **	*% ***	*Density (inhab. / ha)*
Port-au-Prince	598.65	33.16	7.34	605,813	39.62	26.69	1,012
Pétion-Ville	145.77	8.07	1.78	167,759	10.97	7.39	1,151
Delmas	574.51	31.83	7.05	498,754	32.62	21.39	868
Carrefour	403.20	22.33	4.94	233,500	14.61	9.84	579
Croix-des-Bouquets	82.75	4.58	1.01	32,913	2.15	1.45	398
Total slum-type constructed area	1,804.88	100	22.15	1,528,739	100	67.35	847
Residential type constructed area	6,341.16	-	77.85	740,867	-	32.85	117
Total constructed area within the urban area	8.146.04	-	100	2,269,606	-	100	279

Source: HAI-94-003 Project: Evaluation of the population of the Port-au-Prince metropolitan area.

* *Percentage compared to all slum areas taken together*
** *Percentage compared to the total constructed area inside the urban area.*

The shortage in drinking water supply (DWS) is but a single example of inefficient urban management practices, not to say non-existent. The "geographics of survival" is very clearly seen. In Port-au-Prince, the institution in charge of drinking water is the CAMEP, a state-owned company created in 1964, reporting to the Ministry of Public Works, Transportation and Communications. It has a monopoly over the production and distribution of the service. It has however great difficulties in providing water to the urban population, especially to those who live in the poor neighbourhoods. These people are therefore forced to find other supply sources, in particular those proposed by an informal industry, a private supply, a "home-made" solution.

At the same time the public powers are failing, a deregulation of basic urban services process is under way.

In Cité l'Éternel, a neighbourhood built on a landfill on the sea, the first inhabitants remembered the place: founded in 1986, this neighbourhood, which used to count 300 people, had 4,000 people in 1988 and close to 50,000 in 1995. According to one of them, Jean Dimanche, "*the municipality provides no service at all to Cité l'Éternel*". The first wish of the municipality was to destroy the slum but, when the mayor saw what the population was able to achieve (i.e., manage a local drinking water distribution system, along the lines of the utility), "*he declared that what the population had achieved in the area, could not be achieved by the Haitian State in the next 20 years*" (Matthieussent, 1997).

In the so-called "poor" neighbourhoods of Port-au-Prince[3], the number of clandestine connections cutting on the CAMEP network is particularly low. In 1995, when the number of connections of the total Port-au-Prince population was around 13%, it was only of 5% in the poor neighbourhoods (Verdeil, 1995). The difficult access to this type of neighbourhoods (many corridors, unstable soil, steep relief, etc.), the reluctance of CAMEP to work in areas considered to be dangerous, but also the failure of CAMEP to respond to the requests for connection, are as many reasons behind this status of affairs. On the other hand, with a daily income which is often in the order of U$S 1 (or equivalent to 21 gourdes in those days[4]), the inhabitants of these areas do not have enough money to pay a monthly fee to CAMEP. The problem therefore is not so much the monthly rate to be paid but the high initial investment to be disbursed to cover the guaranty deposit, purchase of pipes and others.

Therefore, although once the investment has been paid for, inhabitants of these neighbourhoods could be paying 9 gourdes per cubic meter of water if they were connected to a conventional network[5], they are forced to pay 80 gourdes (to a private owner), i.e., 200 or 300 gourdes (retail prices charged by the water porters). A number of alternative ways to sell water have been imagined: wholesale, as is the case with the tanker, or retail most of the time. That is how more than 90% of the population of these neighbourhoods are supplied with water, although it is also true for the residential neighbourhoods of the capital.

Table No. 2 – Comparison of prices practised by the various operators selling water.

Operators	*Sales price (in gourdes/m³)…*	*…compared to the price of the public utility.*	
CAMEP	9	1	%
Delivery by truck	35	3.9	290
Reselling from private tanks	80	8.9	790
Delivery by water porters	105	11.7	1,070
Retail	200 to 300	22.2 to 33.3	2,120 to 3,230

Source: Véronique Verdeil, 1995.

Generally speaking, we may observe that in these neighbourhoods, the purchase of water from an individual who is connected to the network is the most frequent operation (60%), often practised together or alternatively (19%) with the purchase from a private tank filled up by a truck (46%). Calling upon a water porter is generally speaking less common (10%). Finally

[3] In 1997 it was estimated that, for all of the metropolitan area, slums covered almost one fourth (22,15%) of the urban area and represented 67,35 % of the population. They are located throughout the metropolitan area and on the different sites (seashore, landfills, central parts of the historical center islands, steep embankments, embankments and beds of old rivers, interstitial spaces of the industrial area, inner spaces of the public markets, etc.)

[4] The gourde is the name of the Haitian currency: in August 2004 U$S 1 was equivalent to 35 gourdes.

[5] 9 gourdes/m³ is the average sales price, not the actual price considering CAMEP charges a flat rate to its customers: it is only a reference.

collective supply solutions are very limited: tanks installed by international emergency or development programs are seldom used today or are out of operation (Verdeil, 1995).

Table No. 3 – Main sources of DWS in the poor neighbourhoods.

Subscribed reseller	60%
Paying tap	15%
Tank reseller	46%
Street seller	10%

Source: Véronique Verdeil, 1995.

1.2 Buenos Aires:

A city of twelve million inhabitants, 20% of which live in poor neighbourhoods, most of them without any water supply

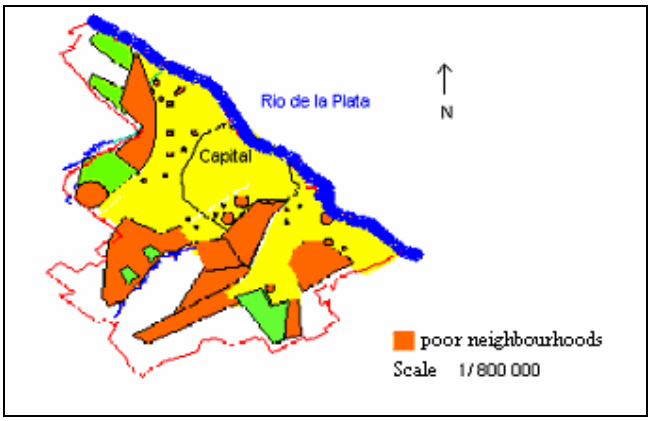
The city of Buenos Aires, capital of Argentina, encompasses at the same time the characteristics of a modern Latin American city having benefited from a particularly strong industrial development during the second half of the 20th Century, and those of a highly fragmented territory in social and economic terms. So, the city and its peri-urban ring are marked by strong contrasts: from the slum called *Villa de Emergencia 31* installed right behind the train station receiving the executives going to their business quarters up to the extreme precarity of those installed in the outskirts of the city living in extremely deteriorated sanitary conditions, almost unheard of in the imagination of the *porteño*[6].

Besides, poverty in Buenos Aires has another face to show. After the crisis undergone by the country for the past few years, the strong pauperization of the middle classes in a country where it had helped build the idea of a nation and that of its historical and cultural model, comes on top of the sedimentation of the structural poverty (NBI, *Necesidades Básicas Insatisfechas*[7]) and the municipalities of the outskirts and the small-ring neighbourhoods of the Federal District (Prévot-Schapira, 2002).

According to data collected by the company Aguas Argentinas S.A. (AASA), there are 593 poor neighbourhoods (2,5 million inhabitants) living in the concession area, out of which 445 (1,1 million inhabitants) on the area served by the network. For the sake of clarity let us recall that out of the 12 million inhabitants living in the city of Buenos Aires in October 2002, 54,3%[8] were living below the poverty line (less than 700 pesos – 200 euros per month), that is 21,2% of the population of the Federal District and 64% of that of the outskirts – more than half of which below the extreme poverty line.

[6] Porteño= Buenos Aires inhabitant.
[7] Unsatisfied Basic Demands
[8] Data provided by INDEC (Instituto Nacional de Estadísticas y Censos) 12/27/2002.

Figure No. 1 – Map of the poor neighbourhoods of the Buenos Aires AASA concession.



Source: Map prepared with data collected by AASA.

Water in poor neighbourhoods under the State-owned company.

In Argentina, the State-owned company for water and sewage, *Obras Sanitarias de la Nación*, was aimed, since its creation in 1912, at introducing itself as the "model" of a public utility by virtue of its triple ambition: public hygiene, income redistribution and land organization (De Gouvello, 1999). For one, the tariffs for water were highly representative of this status of affairs: the Río de la Plata allowed to provide the resource to all of the city of Buenos Aires in large quantities (the aim of OSN was to provide 700 litres per day per inhabitant, that is the highest volume in the world). The issue of supply and rational utilization of the resource were therefore not of primary concern, nor was the issue of cost recovery because the *infrastructure* rationale was predominant over that of an efficient provision of the service. Hence, the tariff had been defined not as a function of the quantity of water consumed – as the system provided for *canilla libre* – all you can use, rather than a metering system, but as a function of a calculation of indexes, a platform similar to that of the tax system based upon the rental value of the dwelling (surface of the land, of the constructed area, type of age of construction, zone coefficient, etc.) to allow for a "equitable" distribution. The idea was for the service to be extended to all of the city within a revenue redistribution rationale.

However, this universal-access-to-the-service project bumped against a major hurdle in its coming together: on the one hand the lowest revenue groups, all in all, were scattered in a more eccentric manner, which means the expansion was integrating a greater and greater population which contributed less and less to paying the service while, on the other hand, the public utility, because of the heavy structural financial losses of the system stopped very quickly to invest in infrastructure, leaving the peripheral areas of the Federal District in the expectation of a connection to the network. The "OSN model" was not in a position to finalize the project because of its unbounded ambition and ultimately led it to the opposite result: a population with a good service in the Federal District and the fringe peripheral areas with a population which badly needed the service waiting to be connected to the networks that the State-owned company was not in a position to provide.

Table No. 4 – Water and sewage coverage before privatization.

	Water	*Sewage*
Federal District (city of B.A.)	99%	99%
Outskirts	55%	36%
Concession total	70%	58%
Number of connections (millions)	1.2	0.7

Source: AASA concession contract.

To be more specific, regarding the access of the poor neighbourhoods to the "water" resource while the company was publicly owned, it is useful to make a distinction between the different types of neighbourhoods[9]:

The *villas de emergencia*, or slums. These are poverty pockets inserted in the "traditional" neighbourhoods, have usually been dealt with, because of its unofficial nature (land property problems, illegal condition of its inhabitants, etc.), along the lines of social assistance and not that of development. Most of the time these populations have been victims of political clientelism. Access to urban services depended to a large extent on political decisions, guided by a short-term electoral vision. For the system to last, the access had to be temporary. Thus, these neighbourhoods have been exposed to a number of drinking water access projects, without ever benefiting from any continuity of their counterparts, the decision-makers, and specially, without ever having been integrated as "customers" with their rights and duties. Access was free of charge, which forestalled any demand for a continuous service.

The problem of the *barrios precarios* – precarious neighbourhoods with an urban grid – located in more remote areas of the urban cluster, was different. Because of their distance to the center and the way the services expansion had been planned for, most of the time these neighbourhoods had no direct technical access to the networks. For water, they could use, as an – expensive – alternative, a well to be drilled (without any quality control) or drinking water to be transported in bottles or drums.

Finally, as far as the *barrios armados* (satellite type – large clusters), they were built during the Perón era as part of large urban building programs (1950-1970) with the aim of providing shelter to the new industrial workers of the periphery. They were built together with the urban services networks. Here again the problem is different. In this case, the difficulties arise rather from a poor quality of the installations and a lack of maintenance of the networks. Besides, the standard practice consisting of not billing or not claiming for payment of the bills became a routine from the very outset and the attitude of the politician who used to "forsake" this type of neighbourhoods very quickly prevented the populations from demanding an improvement of the services.

These two situations differ, therefore, and from a number of perspectives: the size of the populations, the relative importance of the poor neighbourhoods and the water resources tapped by the populations before these experiences started.

The urban cluster of Buenos Aires is much greater and populated than that of Port-au-Prince (12 million inhabitants against 2.5 million inhabitants). The population living in poor neighbourhoods represents close to 2.5 million inhabitants against 1.5 million for Port-au-Prince. In a nutshell, while the Buenos Aires inhabitants of these neighbourhoods represent 20% of the population, in Port-au-Prince they represent 68%.

[9] This classification of poor neighbourhoods of the Buenos Aires city and surroundings was prepared by the *Community Development Unit* of Aguas Argentinas and accepted by the regulatory agency. It is used because of its operational and analytical relevance.

As far as the water sources to be tapped are concerned, the way the populations of the poor neighbourhoods used to solve the problem before these projects were brought about were not the same. They must be taken into account in order to better understand the impact of these new experiences. In Port-au-Prince, the inhabitants were by and large getting their water from small private operators at a much higher price than that charged by a traditional operator in the residential neighbourhoods, lacking any possibility to have access to the conventional water service in a legal fashion. Conversely, in Buenos Aires, in the case of the slums, i.e. poor neighbourhoods imbedded in the city, access to water was mainly achieved by fraud (free-of-charge access) on a tapping on the surrounding network, while the most common practice of the poor neighbourhoods further away from the cluster was to pump water from the underground water tables by means of individual or collective wells (access free of charge to the resource but with an initial investment needed to drill the wells plus an operational cost due to power consumption)[10] (Botton, 2004).

Table No. 5 – Comparative study of the two cases.

	Port-au-Prince	Buenos Aires
Large cities and their poor neighbourhoods		
City size (in millions of inhab.)	2.5	12
Size of the poor neighbourhoods (in millions of inhab.)	1.5	2.5
Size of the poor neighbourhoods (% inhab.)	68%	20%
Profile of Size of the neighbourhoods:		
- slums (% inhab. of the poor neighbourhoods)	NA*	15%
- precarious neighbourhoods (% inhab. of the poor neighbourhoods)	NA*	75%
- large satellite-type areas (% inhab. of the poor neighbourhoods)	0%	10%

** In Port-au-Prince, poor neighbourhoods have different profiles, according to the type of material used (cardboard, sheet metal, wood or "solid") and whether there is an actual grid or not. These neighbourhoods resemble either slums or precarious neighbourhoods. However, we lack reliable information regarding their relative importance.*

	Port-au-Prince	Buenos Aires
Water supply sources of the population before the project.		
Access to the conventional technical network, legally (free of charge)	No	Yes
Access to the conventional technical network, illegally – clandestine connection (free of charge)	Yes	Yes
Individual or collective wells (resource is free of charge but initial investment and operational cost linked to power consumption)	No	Yes
Delivery by trucks (for a charge)	Yes	No
Resell from private tanks (for a charge)	Yes	No
Delivery by water porters (for a charge)	Yes	No
Retail (for a charge)	Yes	Yes

This study of both cases allows us to set the framework for a comparative analysis of the various types of actions carried out for each of them. Although the weight of the local

[10] A detailed study of the water supply methods of the Buenos Aires inhabitants can be found (per neighbourhood category: slum/precarious/satellite) in: Botton S., "Les débranchés des réseaux urbains d'eau et d'électricité à Buenos Aires : opportunité commerciale au risque pour les opérateurs ?", *Flux, Cahiers scientifiques internationaux Réseaux et Territoires* No. 56/57, avril septembre 2004.

characteristics is *a priori* a key factor of the comparison, both case studies may also be surveyed looking for common grounds. To do so, an analysis of the contractual definitions as well as the *modus operandi* of each drinking water service operator must be carried out beforehand.

2. The terms of reference of the operators and the action strategies.

The two experiences shown in this article vary widely in terms of local context, as we have just shown, but also in terms of contractual, institutional and strategic definitions. While the Port-au-Prince experience is that of a development program based upon an innovation of the Haitian public utility (CAMEP) supported by a French NGO (the Groupe de Recherche et d'Echanges Technologiques, GRET), the Buenos Aires experience was born from a dramatical institutional change: the privatization of water and sewage services and the creation of the largest private water concession in the world (Aguas Argentinas S.A.)

2.1 Port-au-Prince:

Partnership between a State-owned company and the neighbourhood committees.

In 1995, after three years of embargo, the European Union established the ECHO program, an emergency program to provide assistance to the poorest members of the population. This program funded the GRET in order to provide drinking water to eight poor neighbourhoods of Port-au-Prince. The GRET decided to bring onboard the CAMEP, which the latter accepted. Part of the funds that came in later, especially those of the Agence Française de Développement, were given to it directly. As of 1996, this project also received funds from the European Union (until 1998) and the Agence Française de Développement (until this day) to provide water to another fourteen neighbourhoods.

Table No. 6 – Overview of the different funding stages of the project.

Years	*Funding*	*Budget (in euros)*	*Creation of new neighbourhoods*
1995 – 1996	EU	1,300,000	8 neighbourhoods
1996 – 1998	EU AFD	875,000 700,000	6 neighbourhoods
1998 – 2000	AFD	2,600,000	5 neighbourhoods
2003 – 2005	AFD	2,400,000	3 neighbourhoods
Total		7,875,000	22 neighbourhoods

Source: AFD-EU funding agreements.

Another twenty-five neighbourhoods where the CAMEP decided to distribute water with its own funds or with other sources coming from international organizations were added to the first twenty-two neighbourhoods concerned by the project. If one takes into account the impact of this project in terms of construction and implementation of a public drinking water policy in the metropolitan area, in 2005 there will be forty-five neighbourhoods and close to 800,000 inhabitants involved, i.e. more than 50% of the population living in the poor neighbourhoods of Port-au-Prince.

Two main actors have played a role: CAMEP and GRET. Their terms of reference have evolved over time. While the public utility has always been the customer of all of the infrastructures, the GRET has played from the very beginning the role of prime contractor, both technical and social.

The technical contracting tasks have gradually been transferred from the GRET to the CAMEP while the social engineering tasks (insert No. 1) have been shared by the GRET and the CAMEP and, as of 1998; they have been in the hands of the newly created Unité de Coordination des Quartiers Défavorisés (UCQD)[11] inside the utility. The evolution in the terms of reference has been guided by the competencies transfer principle, i.e. transfer from the GRET to the CAMEP of the social engineering aspects.

Insert No. 1 – Social engineering

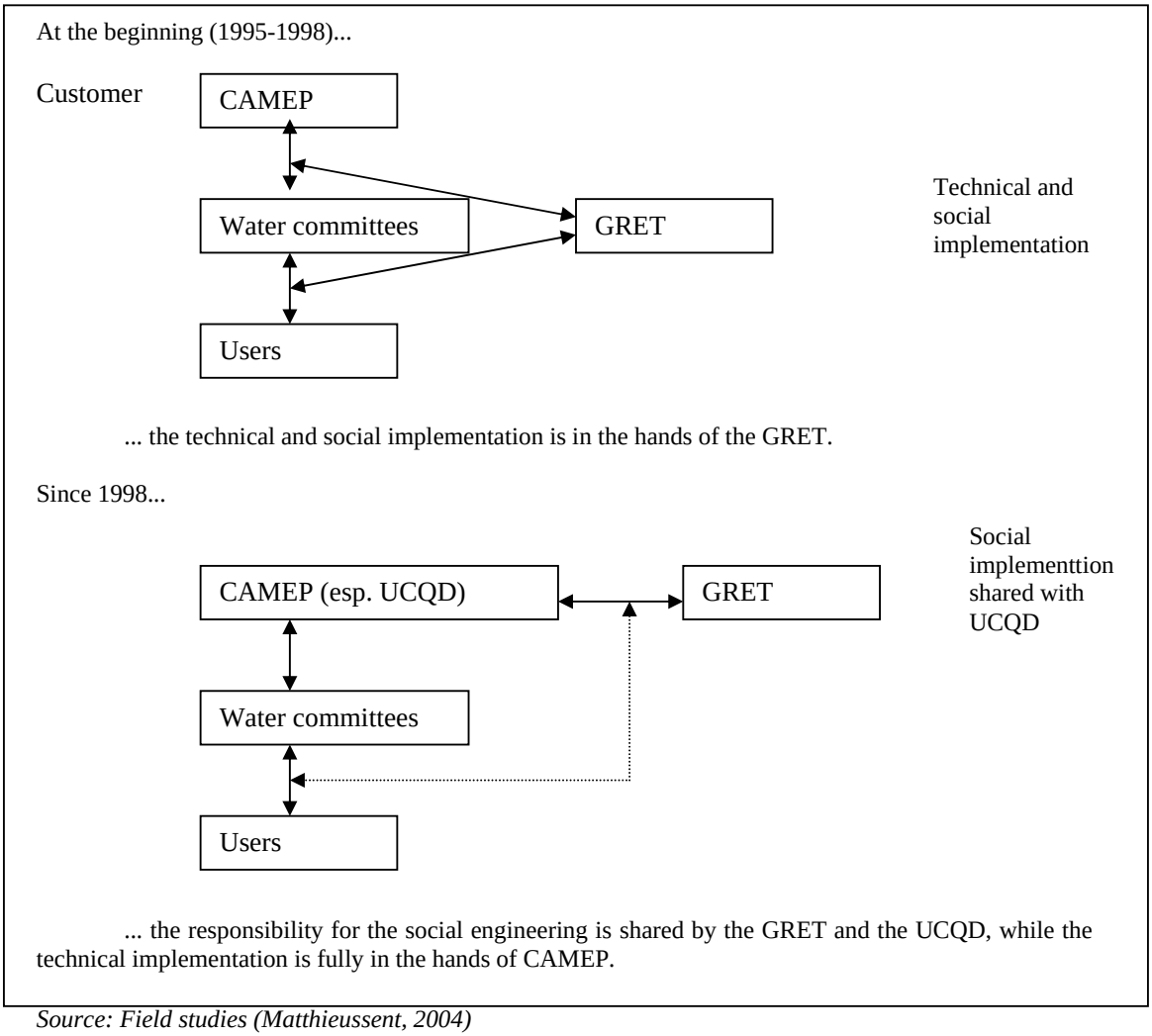
Social engineering means the following:

- the **partnership construction** process following a common goals of the players rationale;
- and the actual task of carrying out the necessary **field activities** in order to:
  - install the structures responsible for distributing the service to the neighbourhoods,
  - provide capacity building for these structures and the follow-up of their activities,
  - the actions leading to a direct cooperation between these structures and the operator,
  - the coupling between the social organization of the neighbourhoods and the technical tasks.

For example, in order to determine the feasibility of installing a water distribution network in a neighbourhood, social engineering allows to complement the technical feasibility (water availability, ascertained by CAMEP): it consists in analyzing the demand characteristics, then locating the neighbourhood internal social and political structures allowing to establish the management committee of the service.

[11] Translator's Note: Coordination Unit for the poor neighborhoods.

Figure No. 2 – Organizational chart of the new service (CAMEP)



Source: Field studies (Matthieussent, 2004)

From the beginning, the general goals of the project were as follows:

- improve the water service for the poorest populations and hence improve public hygiene;
- enhance the structuring of the poor neighbourhoods by encouraging the inhabitants to gather around representative organizations to work on general purpose local development projects;
- assist the utility, CAMEP, in preparing a more efficient water distribution policy for the poor neighbourhoods.

These goals, which are theoretically quite different between them, became interdependent on the field: in order to improve the DWS conditions of these neighbourhoods, it quickly became necessary to link the CAMEP, on the one hand, and the local social and political forces, on the other one. This is easy to understand from the project principles that have guided the operations: connection to the public service, support for an outsourcing of these technical and commercial functions for the poor neighbourhoods and, therefore, making relationships between these players more formal and contractual.

In order to respond to the inadequacies of this market, the program decided to take into account the economic dimension of the Port-au-Prince water market and to follow the customer-supplier approach.

Finally, considering the time constraint is a non-trivial dimension of the "project rationale", the intermediary body, GRET, tried to anticipate and plan for the movement from a micro to a macro level, on the one hand, and to slowly transferr its competencies to the CAMEP, on the other hand.

The project methodology established by both the GRET and CAMEP[12], is based on the following principles:

1. The water to be provided to the poor neighbourhoods comes from the CAMEP network[13].

2. Water is to be purchased from CAMEP at a specific rate, a social tariff of 5,3 gourdes/m^3, or 0,3 U$S/$m^3$ (against 9 gourdes for the average sales price, knowing that the typical billing system is based on a flat rate) specifically stipulated by the company for these neighbourhoods.

3. Water is distributed to the users through paying public taps from which it is sold at an average price of 15,84 gourdes/m^3, i.e. 1 U$S/$m^3$, or five to six times less than before (the prices to be paid to private resellers).

4. To the extent it is technically feasible (locations available) water tanks for stocking purposes will be built inside the neighbourhoods in order to provide for a constant water supply to these public taps.

5. These paying collective public taps are connected to the main network through a meter. That meter is the limit between the area of responsibility of CAMEP and that of the neighbourhood management committee, also called *committee dlo.*

6. The water retail is carried out by sales persons selected and paid by the committee.

7. This committee is made up of representatives of all the baseline organizations and "leading" citizens of the neighbourhood. It is linked to CAMEP by a service delegation contract. It holds a number of client-related responsibilities: selecting the number and the location of public taps, signing of the works, etc. The committee pays the bills which are monthly distributed by CAMEP and is in charge of maintenance and operation of the network. CAMEP provides no service whatsoever inside the neighbourhoods.

8. With the money coming from the sale of water at the public taps, the committee pays its bill to the CAMEP (about 1/3 of the turnover). The gross margin obtained by the committee on the water sales (between 10 and 12 gourdes/m^3) allows to pay the salespersons, to give an allocation to the members of the committee and to finance the network maintenance tasks. The potential surplus may be used to finance small works which may have a collective interest for the neighbourhoods: gangways, collective showers, etc.[14]

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[12] Together with their partners (GATAPHY, private enterprise: SOLAM, Haitian NGO; Hydroconseil and SICA: respectively a French and a Haitian consultant).

[13] By avoiding the private water transportation companies (which was the case with the previous projects organized by NGOs or international organizations – WHO – UNICEF in Canapé Vert and La Saline, ASSODLO at Cité l'Éternel, CDS at Cité Soleil, etc.).

[14] This type of reinvestment has been widely supported by the CAMEP/GRET "Eau et Santé" project carried out between 2000 and 2002 funded by the European Union (one million euros).

2.2 Buenos Aires:

The private sector and the challenge of the largest water concession in the world.

In 1993, after the Dublin conference that stated that water was a "economic and social good", a number of privatization of water and sewage state-owned companies took place throughout the world. In this context, the Argentine Government launched a call for tenders for the Buenos Aires concession (the largest in the world) in order to continue and improve the activities of *Obras Sanitarias de la Nación*, a largely money-losing State-owned company the infrastructure of which was strongly deteriorated and in need of hefty investments.

In 1993, the Suez group won the call for tenders. The concession contract, based upon the "universal service" notion (Arza, 2002), stated that in the long run (30 years) almost all of the population of the concession (Federal District and greater Buenos Aires area) had to be connected to both services – water and sewage – whenever the urban configuration so permits. The contract actually excludes the slums (as it only takes into account that networks will be expanded to the urbanized areas) as well as the internal networks of the *barrios armados*, great groups of dwellings under the responsibility of the municipalities. **There is no contractual obligation whatsoever regarding the provision of service to these two types of neighbourhoods which, in terms of population, represent more than 25% of the poor neighbourhoods inside AASA's concession area**[15].

Every five years the company provides the regulatory agency (ETOSS, *Ente Tripartito de Obras y Servicios Sanitarios)* with a plan encompassing all of the expansion works to be carried out for that particular period, as well as the corresponding tariff adjustments. The five-year plan must be accepted by ETOSS and represents a firm commitment from the company, to be fined by the regulatory agency in case of non-compliance.

The technical and commercial elements at stake for Aguas Argentinas are to be found in the expansion goals, most of which target the poorest neighbourhoods and the ones located furthest away from the concession, mainly made up of precarious neighbourhoods[16]. The expansion goal at the time of take-over (1993) was to integrate 3,5 million customers, out of which 65% live in poor neighbourhoods[17]. The challenge is huge.

Table No. 7 – Population connected and to be connected to the services per type of neighbourhood in 1993.

(1993)	*Population connected (M inhab.)*		*Population to be connected (M inhab.)*		*Total*
	Water	*Sewage*	*Water*	*Sewage*	
Standard neighbourhoods	5.6	4.7	1.4	2.3	7
Poor neighbourhoods	0.4	0.2	2.1	2.3	2.5
Total	6	4.9	3.5	4.6	9.5

Source: AASA data, 1998

[15] Of the total population of the concession area's poor neighbourhoods (more than 2 million people), around 15% live in slums, 10% in these large groups of dwellings and 75% in precarious neighbourhoods (data stemming from the IIED-LA-UADE report: "*Participation of the private sector in drinking water and sewage in Buenos Aires, balancing the economic, environmental and social goals*", July 1999).
[16] The second category of neighbourhoods according to the poor neighbourhoods listing mentioned before.
[17] AASA data.

Establishment of an access to the services program carried out by the Community Development Unit[18].

Technical access to the network: as specified in the concession contract, the goal is for the water network to totally cover the area. The expansion takes place following the shape of a *finger city* from the Federal District where the water intake and treatment facilities are located. The technical approach looked for is simple: a surface network with water coming from the Río de la Plata. In spite of having good quality water tables in most of the areas, the solution stemming from drilling wells has not been initially envisaged, a criterion which provided importance to that of being close to the network for the expectations of those to be connected. As of late, this idea of a single supply technique has been partially revisited with the signature of projects[19] which take into account the construction of local networks using water from the water tables, which should be connected to the primary network within a few years, once the expansion works have been finished. As far as the connection is concerned, the contract specifies the obligation to be connected to the network once the expansion works have been finished. The sole connection envisaged is individual and for houses, there is no possibility of public taps. Except for the technical solution consisting in obtaining water from a well (to be drilled before the works of the company reach that particular area) no alternative of a linkage to the public water network has been envisaged for the poor neighbourhoods.

Economic access to the service: the cross subsidy tariff system that existed when the company was state-owned is still valid today. It is used on the one hand to finance the operation (redistribution tariff) and, on the other hand, since 1997, for financing the network expansion[20] (Faudry, 1999, Schneier-Madanes, 2000). Since January 2004, a specific resolution has been passed by the regulatory agency regarding the water service tariff for the poor neighbourhoods: it stipulates a bimonthly invoice, after reduction, of between 4 and 6.5 pesos (i.e. between 1.5 and 2.4 U$S) per service. Hence, solutions which used to be *home-made* and to adapt the supply of the services to the economic power of the new customers have been institutionalized (discount stated in the invoice for participating to the works, specific tariff for the MPG projects[21], social tariff[22], etc.).

Organizational aspects: in order to face the challenge of providing these services to the poor neighbourhoods of the area, the concession company took the problem of urban poverty very soon on board. On the other hand, the points of view of the group (Suez-Lyonnaise des Eaux, later Suez-Environnement), which was very favourable in the beginning to sustainable development programs, less so later on regarding the investment dynamics in the developing nations, have always had a constructive impact regarding the more or less solid support felt by the branch to carry out its actions. However, the project initiative has always been fostered and guided by the operational and social needs established at a local level.

From the very outset, in 1993, Aguas Argentinas' concern was to think about how it would expand on the territory established by the concession. It very quickly realized how challenging it was to provide services to the poor neighbourhoods and, before starting with the operational stage of the projects, it placed the reflection on this issue at the very heart of its actions.

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[18] Henceforth called *Sustainable Development Unit*.
[19] Agua + Trabajo (Water + Work) program, municipality of La Matanza (2004).
[20] At the time of take-over, expansion works were to be financed by the newly connected users (by means of an "infrastructure and connection" charge). Because of patent economic distortions, this was renegotiated in 1997. Since then, it is based on a co-financing by all of the network users (by means of a "universal service" charge (SU)).
[21] Translator's Note: MPG – Management Participation Models.
[22] A social tariff is not necessarily linked to the poor neighbourhoods. Starting from an annual budget of 2 million pesos allocated by the company, invoice reduction modules (4 pesos per service) are distributed by the municipality to the customers as a function of social and economic poverty criteria.

In 1994-1995, a first Central Unit was created. Four people were in charge of creating networks of partners, to make partnerships with the NGOs, to think about the technical and financial solutions and to devise a "social methodology". The first partnership created with an NGO (the IIED-LA- International Institute for Environment and Development – Latin America) lasted five years (1994-1999) and allowed to have detailed analyses of the concession (social stratification, geographical distribution of the different social and economical income levels, identification of poor neighbourhoods, etc.). In the beginning, the effort focused rather on a methodological reflection than on operational issues, as can be seen from the following table:

Table No. 8 – Population connected and to be connected to the services per type of neighbourhood in 1998.

(1998)	*Population connected (M inhab.)*		*Population to be connected (M inhab.)*		*Total*
	Water	*Sewage*	*Water*	*Sewage*	
Standard neighbourhoods	6.8	5.5	0.2	1.5	7
Poor neighbourhoods	0.8	0.3	1.7	2.2	2.5
Total	7.6	5.8	1.9	3.7	9.5

Source: AASA data, 1998

Table No. 9 – Population connected between 1993 and 1998 per type of neighbourhood.

(1993-1998)	*Population connected (M inhab.) to water between 1993 et 1998*	*Population connected (M inhab.) to sewage between 1993 and 1998*
Standard neighbourhoods	1.2 (75%)	0.8 (88%)
Poor neighbourhoods	0.4 (25%)	0.1 (22%)
Total	1.6	0.9

Source: AASA data, 1998

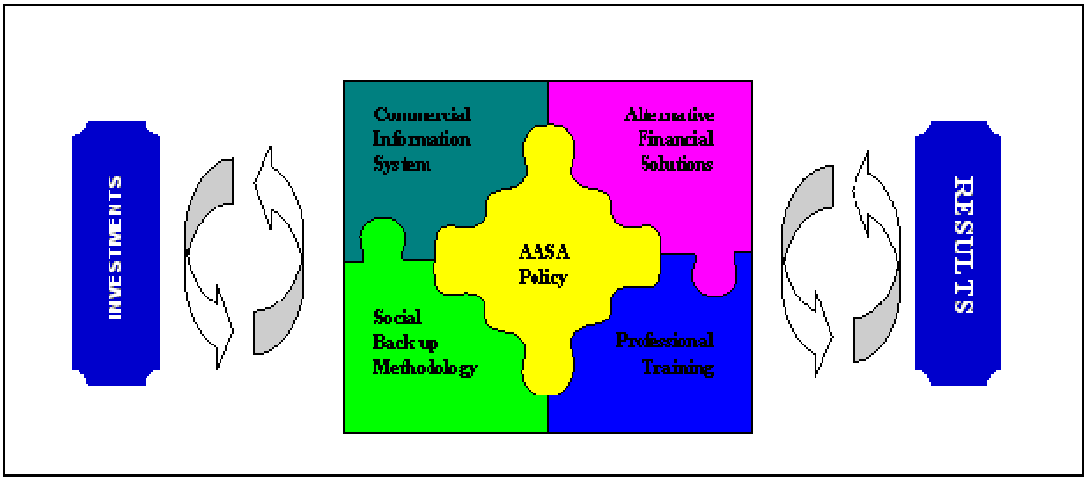
In 1999, the *Community Development Unit* (CDU) was created. The original goal was to define and implement a **social back-up methodology** for the network expansion works in the poor neighbourhoods[23] of the concession. Little by little, the scope of these activities and responsibilities was enlarged until it encompassed, among other lines of work, the **regularization**[24] of the services in the poor neighbourhoods[25] and the **professional training** of the company staff (to be knowledgeable on issues linked to its activities: sustainable development, direct communication, management of community meetings, management of conflicts, participatory management of the projects, etc.). From the beginning, the Aguas Argentinas development program entrusted to the CDU was strongly personalized around the person in charge of the unit. His integration to the company, in 1999, created a new labor momentum and a very important professionalization of the team and the social engineering program.

[23] Let us recall that the vast majority of the poor neighbourhoods concerned by the problem of expansion are the *precarious neighbourhoods* as the *slums* and the *peripheral cities* are not included in the contractual goals of the operator.

[24] In the water sector, the term *regularization* concerns the establishment of a standard technical and commercial relationship with certain neighbourhoods. It can take very different shapes. For example, it can mean organizing the expansion of the service to a neighbourhood that is not connected but located inside an area which is served by the concession, or to take a closer look at the unpaid bills of certain customers in order to organize workshops focusing on commercial issues, etc.

[25] The scope of the CDU was enlarged to include all of the poor neighbourhoods in the operational projects and not only the *precarious neighbourhoods*, as was initially the case.

Figure No. 3 – How AASA got prepared to manage the poor neighbourhoods.



Source: GDC-AASA, 1998

Since the beginning of 2002, the goal of the CDU was to define the concessionaire's policy for the low-income neighbourhoods by having the civil society understand the value of the public/private participation model. In this perspective, it defined a series of almost forty projects called **Participatory Management Models** (MPG). The purpose of these MPGs is to achieve a full-scale expansion or regularization of the services in a particular neighbourhood (technical and commercial stages) and they are built on an essential three-party agreement, institutionalized by a contract between the company, the community of the neighbourhood[26] and the municipality. It is then agreed upon by the regulatory agency, whose role is to supervise and authorize the process and who authorizes the consolidation of the partnership between all of its players.

Insert No. 2 – Participatory management models (CDU-AASA)

The criteria to be fulfilled in order to carry out an MPG are valid for all the participants:

The community of the inhabitants of the neighbourhood must request the service (following the concept of informed request established by the company, although the project will only be carried out if 80% or more of the population of the neighbourhood agrees). It must be able to organize itself and choose its representatives. It must also provide the manpower when the works stage arrives.

The municipality commits itself contractually to honour its responsibilities with the works (opening trenches in the streets, etc.), and to distribute the necessary tools (gloves, shovels, etc.) and to organize the distribution of the funds i.e. the *planes jefes y jefas de hogar* "heads of household programs". These are subsidies of 150 pesos per month[27] allocated by the government for the heads of households participating in a community labour program[28].

[26] We call *neighbor community*, according to the term used by AASA, all of the inhabitants of the neighbourhood. This community appoints its representatives, elected or not, to sign the contract.
[27] In 2002 it was the equivalent of 40 euros.
[28] As far as the remuneration of the manpower is concerned, besides these funds, the inhabitants who participate in the works benefit from a reduction in their water bill during a number of years.

The company is in charge of the technical feasibility of the project. It must provide the necessary materials (pipes, wrenches) and the technical training of the manpower (training workshops for people to become familiar with the techniques and the safety issues surrounding them) as well as the communication with the community at large (community workshops to introduce the commercial aspects, providing answers to questions or doubts from the neighbourhood inhabitants, etc.).

Besides the MPG projects, which are the heart of its activities, the C*ommunity Development* unit also continued to enlarge its missions to encompass potential development levers. Thus, different projects came about: educational workshops, assistance to sanitary or cultural projects with the neighbourhoods, consolidation of the institutional relationships within and without the company, cooperation among sectors (creation of a forum on enterprise and public service - water, cleaning, electricity, gas – on the issue of management in the poor neighbourhoods).

The Aguas Argentinas CDU developed a social action methodology in the low income neighbourhoods which is defined by a "constructivist"[29] and uses different tools to fulfil the different goals it set for itself. It involves the active participation of all of the program players, it works to make sure that the beneficiary of the activities are not perceived as labour objects but rather as partners of a process. This social action methodology provides the poor neighbourhoods with the possibility of becoming actual customers of the concession while avoiding at the same time the fast track-slow track approach.

In spite of different contexts and terms of reference, both operators, CAMEP (assisted by GRET) and AASA (specifically the CDU) established actual social action strategies encompassing technical and commercial approaches to the service. Besides, these action methods have involved institutional changes (internal organization and network governance). Nowadays, the common pattern between these two experiences, marked by a professionalization of those involved (both internal and external) led to a prominent progress in the field of access to water for the poor urban populations, most of which were until now excluded from the service.

3. Operational Results

3.1. Port-au-Prince:

Moving from a development project to the implementation of a public policy allowing poor neighbourhoods to have access to drinking water.

Over a period of eight years, the GRET/CAMEP project allowed:

- to provide drinking water to nineteen (19) neighbourhoods of Port-au-Prince, i.e., a population of around 300,000 inhabitants, by installing seventy-seven (77) public taps managed by the neighbourhoods committees;

[29] What Aguas Argentinas called the *enfoque constructivista* (constructivist approach) refers to this social engineering labor methodology involving all of the players in all the stages of the program.

- to involve the public company in providing water to the poor neighbourhoods: since 1998, through its poor neighbourhoods coordination unit (UCQD), CAMEP became institutionally involved in the provision of water to twenty-five (25) additional neighbourhoods of the capital city, which shows the momentum gained by this operational innovation and the gradual evolution of the project towards building a public policy.

Globally speaking, the poor neighbourhoods populations involved in this new service are estimated at **almost 800,000, i.e., 50% of the poor neighbourhoods inhabitants**. Finally, until April 2005, three new neighbourhoods are to be comprised by the program, and the water to be received by those neighbourhoods already involved is bound to increase. In some of the neighbourhoods already involved, the quantity of water they receive is still not enough compared to the existing demand (see table No. 9).

The total cost of the works carried out so far thanks to international funding, i.e., 22 neighbourhoods, is 8,0 million U$S dollars, out of which an average of 40% have been used to finance the software (i.e. the social engineering: funding the structures, organizing and training the neighbourhood committees).

The following table, prepared in 1999, concerns fourteen out of the forty-four neighbourhoods which today receive this new service. It provides a global overview of the service provided.

Table No. 10 – Main characteristics of the DWS of 14 neighbourhoods of Port-au-Prince.

Number of inhabitants	216,000
Number of taps	60
Average supply time (h/d)	3 to 4
Quantity of water distributed (m^3/d)	1,161
Estimation of the number of inhabitants with an individual connection	10,800
Number of inhabitants to be supplied	205,200
Daily water needs based on the standards : 20 l/d/person (in m^3)	4,104
Needs covered	29%

Source: UCQD, CAMEP, June 1999

Although the project allowed to increase the access-to-service index it has not fully satisfied the populations from a strictly quantitative point of view: the 20liters/person/day standard has not been achieved.

Results from the perspective of the neighbourhood inhabitants.

For the people in the neighbourhoods, this project, which today has become part of the CAMEP policy, came as their "lucky day". The installation of public taps in the neighbourhoods is a response to an obvious demand: a year and a half after the first neighbourhoods were connected, almost nine out of ten people used these collective taps provided by CAMEP. There are four guiding factors leading the people toward this new supply method: the proximity to the service, the water quality, its sale price and the "community" aspect of the service. Mr. Daniel Henrys, president of the GRET-Haiti, mentions the sanitary impact: "*by targeting poor neighbourhoods, this type of project allows to eliminate some potential risks that the homes without drinking water may cause to the rest of the population; in particular, this type of action allows to improve the morbidity indicators, specially in the case of diarrhoeas*".

Besides, the project also brings about an organizational innovation with its corresponding impact on the quality of service for the user: the fact that the service is locally managed from a technical and commercial perspective by water committees, i.e., "community" players for the

users and "grass roots agents" for CAMEP. This delegation of the final distribution management by CAMEP onto neighbourhood committees allowed to lower the operational and the maintenance cost of CAMEP, a number of savings that allowed to free local financial resources which in turn led to the participation of the partners (higher income for the distributor, reinvesting in neighbourhood projects for the committees[30], lower prices of water for the user).

At a second level, the committee, as a 'middleman' between the users and the state-owned company, conveys the complaints to CAMEP. In other words, it is a bridge in the service relationship, the commercial relationship and also in the citizen relationship built between the poor neighbourhoods' user and CAMEP, which until now was seen as a representative of a public service on which it was absolutely impossible to count. Hence, the committee is not seen any more as a simple intermediary of a service: it represents the users, on the one hand, and participates in the co-production of public goods, on the other[31](Jeannot, 1998). As such, it is an intermediate road between the state-provider and a "back-to-the-market" approach, in the debate of public services (Laville, 1994, Conan, 1996). It thus becomes a driver, in a Haitian context, of the local citizenship.

The results for CAMEP, the utility

The option of a partnership with the utility is a political choice. In fact, there are institutional reasons behind the motivations of the Haitians counterparts and the GRET consultants: the year 1994, when the program started, was when (constitutional) law and order was reinstated. This was a context were the priorities were to rebuild law and order reinforcing the credibility of Haitian institutions. Actually, on this issue, CAMEP used to embody the crisis of a public utility: it was incapable of respecting the very principles of a public utility, i.e., continuity, equality and flexibility (Jeannot, 1998), therefore the people did not believe in it. Thus, although the first funds for the project were due to "emergency" situations, the method selected for the project follows a different rationale. The choice of CAMEP as a partner does not only respond to the water needs of the population but rather to a social choice, as the idea behind it is that the public service may play an important symbolic role in the construction or reconstruction of a state and even provide a collective feeling of a nation.

Today, all the neighbourhoods involved in the project are paying on a regular basis, every month, their bill to CAMEP. From a global perspective, CAMEP only covers 50% of its bills while at the same time it bills only 50% of its production. The first advantage for the public utility is to be found in the commercial arena. Granted, in terms of water volume, these neighbourhoods are small customers for CAMEP. Calculations have shown that only 1% of CAMEP's production is used for this purpose. However, these are solvent and conclusive customers, and it would be difficult for this institution to lose them: this 1% of production allows it to supply water to 50% of the population of the slums, which represents 30% of the Port-au-Prince population.

Henceforth, CAMEP has an important commercial argument vis-à-vis its other customers, who are often bad payers, as said Gérald Jean Baptiste, former Director General of CAMEP, when interviewed in April 1997 (Matthieussent, 1997): "*the fact that these people of the slums pay their bills on a regular basis is a very hefty argument for CAMEP when facing its other customers (…). This project with the slums has enhanced the image of CAMEP, the sole state-owned institution that has managed to supply water to the poor neighbourhoods and to have a dialog with them, to enter the slums and provide them with an organized service. A partnership*

[30] There are many "community" initiatives prepared by the committees: paving of streets, funds for credit cooperatives, construction of public showers, construction of additional public taps, rehabilitation of football fields, construction of bridges and cut/walks, etc.
[31] Ultimate grade in the citizen relationship scale, linking public service and users, as established by Gilles Jeannot.

relationship is thus established between the populations and CAMEP as far as water is concerned: they know it is the body that brings them water, that it is their water and that there is a total transparency from the moment they pay their bill to CAMEP".

Stakes

Considering the experience gained and specially the change from one scale to the next, from a development project to the construction of a public policy and its systematic implementation, the outlooks are to be measured in terms of the capacity of the public powers, in this case, the CAMEP, to respond to the growing demands of the new neighbourhoods to become integrated to this service.

However, considering the low investment capacity of the public-owned company, it is still heavily dependent on international aid, which in turn fluctuates as a function of the evolution of Haitian politics. Today, almost ten years have gone by. The difficulties of transferring the competencies of the intermediate body, the GRET, to CAMEP, the public utility, have almost been overcome. The main stakes reside in the capacity of the company to:

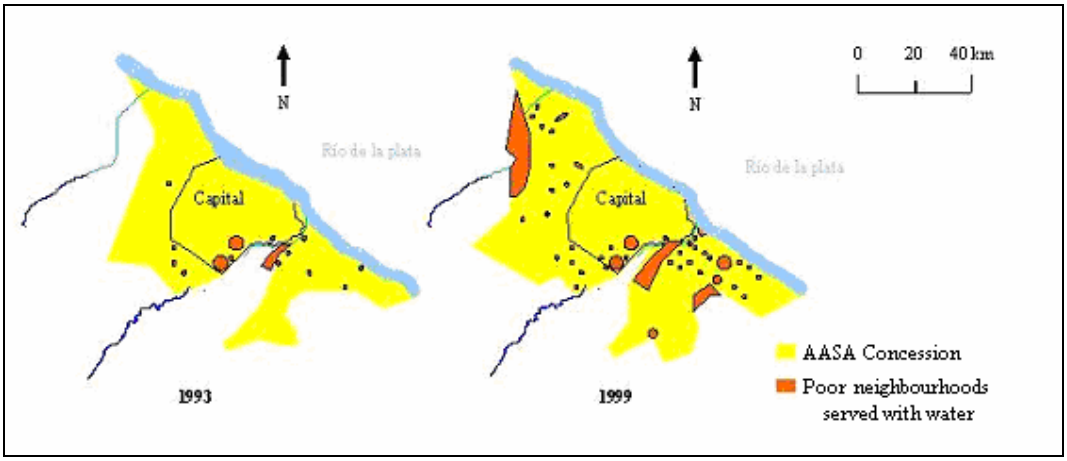
- Honour its commitments towards the neighbourhoods it supplies;
- Increase the water flow it supplies to the neighbourhoods who already benefit from the service in order to respond to the minimal needs of the population;
- Be able to respond to the continuous connection demands made by the new neighbourhoods, whose numbers are continuously growing.

All of these goals will only be reached if the public authorities, with the support of international aid, first resolve the problems linked to maintenance of the existing network, the reduction of both technical and commercial losses on the network and if they manage to increase the production capacity by making the necessary production infrastructure investments.

3.2 Buenos Aires

After the preparation stage of the operator, the first results announce that the "poor neighbourhoods" projects are moving to a massive stage

Figure No. 4 – Map of the AASA concession of poor neighbourhoods connected to the water network.



Source: AASA map, 1999

Quantitative results in terms of connections

Among the activities carried out only in 2001[32], one can see that 23,000 customers have been added to the network, that 28 different works have been performed without any incidents, that 38,000 customers have solved their technical and commercial paperwork and that 1,300 employees of the company have been trained.

As of 2002, the installation of **participative management models** (MPGs) marks the actual beginning of the operational stage for the company. It came about together with a continuous growth in numbers and dimensions of the operational projects. 12 MPG projects were actually carried out in 2003. They allowed to connect 8,000 people. In 2004 there were 21 projects involving the connection of 30,000 people, whereas the projections for 2005 envisage the connection of more than 500,000 people, thanks in particular to the implementation of the "Agua + Trabajo"[33]program.

This program, which started after a direct request of the Argentine president, considers the connection to the water service of a vast number of poor neighbourhoods of the La Matanza municipality (second ring of the outskirts) and is based upon a specific organization: it stems from a model similar to the MPGs, and envisions the participation of neighbourhood cooperatives benefiting from a fund with more than 35 million pesos (around 13 million US dollars). It is a very ambitious project (178 neighbourhoods) which should allow to eventually connect more than 400,000 people.

The qualitative results

Profitability of the program: It is true that the profitability evaluation of these service extension projects to these neighbourhoods has still not been finished, by lack of clearly defined criteria. However, it is already possible to see some degree of improvement in the bill collection rate after a commercial effort was carried out (specific workshops, for example). Likewise the payment ratios are very good (much better than those in the traditional neighbourhoods) when the neighbourhood community participates directly in the management tasks (handing out of invoices, neighbours getting together to pay, etc.). On the other hand it is worth reminding that the payment of the water service is not a major obstacle for the inhabitants of the poor neighbourhoods to the extent that the incompressible water supply costs existing before the connection to the urban network were much higher.

Results in sanitary and social terms: Besides the commercial profitability aspects, the benefits obtained by the company and the Argentine society from the programs, in both sanitary and social terms, have already shown very encouraging results such as, for example, the reduction of 25% of infant mortality throughout the concession since 1993 (Galiani, 2002). On the other hand, the program allowed to improve the dialog between the neighbourhood communities, the municipalities, the regulatory agency and the operator, to assist the neighbourhood inhabitants in getting organized (selecting their representatives, participating in the actual works, meetings, etc.) and thus to bolster the community organization. On the other hand, its contribution to the citizenship (by means of training programs for the neighbourhood leaders) and the obtention of title deeds, access to small credits upon showing the water bills, etc. is worth mentioning.

Capitalization and Institutionalization: Besides, in order to make the development specialists more professional, the operational projects came along with a gradual capitalization of experiences which allowed, inter alia, to create a new methodological tool for the company – and the group – in 2001: it is called the "low income neighbourhoods management handbook" which comprises the experiences and labour methodologies of the three axes previously

[32] Data obtained from the activity reports of AASA's CDU team.
[33] Translator's Note: Water+Work

mentioned. The purpose of continuously taking advantage of experiences and methods is to be able to better replicate the practices in other contexts.

Stakes and perspectives

However, in spite of a gradual construction of a program extremely well adapted to the problems of the company and the poor neighbourhoods, the CDU faces a number of challenges when it wishes to deploy its activities. The main limitations of these programs are:

- The acceptance, by the organization itself, of the rationale behind the need to integrate the development programs in its traditional activity. In other words, the fact of recognizing these neighbourhood communities as customers just like all the other ones. The issue is therefore that of an awareness of the company players who must adapt new paradigms, which their company has not yet fully integrated.

- Following up and deepening the professionalization of the company along the development path. Indeed, a simple acknowledgement of the need to integrate development programs in the company activities is not enough to program for a successful commercial integration of the concessions' poor neighbourhoods. A professional task must also be carried out and the company must enter a new and complex field of activities: the work of the "developer" cannot be improvised.

- The very strong personalization of the program around the person in charge and the need to think about replacements in order to guarantee the sustainability of the program, with the problems this brings about in terms of selecting those in charge, in terms of professional competencies, bonds and the fact of exercising a certain degree of authority and liaison between the head office and the branch.

Presently, and thanks to the support from general management, the CDU activities become more and more institutional, acknowledged and integrated. However, although the momentum is gained, it is also true that the raison d'être of the poor neighbourhoods project has not been identified by most AASA employees. The actual integration will need a number of events which remain to be defined, in particular the negotiation with the Argentine government – in charge of determining priorities and actions to be taken, as well as the profitability tests of these projects, which can not yet be evaluated. This poses a number of problems to both the commercial and financial departments.

Insert No. 3 – The Argentine crisis

The positive impact of the Argentine crisis on the program

Results may indeed seem disappointing: ten years after take-over and four years after the beginning of the social engineering program, only 25% of the poor neighbourhoods inside the concession area have access to these services[34]. The development programs, in spite of a "market opportunity" perspective for the operator, are suffering from the lack a global policy for the concession (efficiency of the regulatory agency and definition of social policies) and they bump against the questioning of the public-private partnership model, after the devaluation of the peso in January 2002, preamble to the unilateral violation of the concession contract: the tariff stipulated in the concession contract was in US dollars. The economic emergency law enacted in January 2002 instituting the *pesification* of tariffs, put an end to the concession

[34] AASA data

contract terms. Since then, a renegotiation of the concession contract for all public utilities is under way.

However, it is interesting to see the impact of the December 2001 crisis on the "poor neighbourhoods" programs: paradoxically, the crisis did not slow down the development of the projects. On the contrary, the year 2001 became an actual springboard for the operational stage of the participative management models. Moreover, these projects were the only opportunity to proceed with the extension of the networks, since all the remaining projects which have been negotiated for the five-year plan had been temporarily stopped. This strange situation is the result of a number of combined effects: on the one hand, the *maturity* effect (the crisis arrived right when the company was finally ready to establish true projects for the neighbourhoods), on the other hand the *cost* impact (expansion projects in the neighbourhoods are generally less expensive than traditional ones)[35]. Finally, the *image* effects (during the contract renegotiation period and while many private operators are been finger-pointed by civil society, the "poor neighbourhoods" projects represent the *cara humana* (human face) of Aguas Argentinas' activities.

These two initiatives have allowed the poor neighbourhoods to have access to the water service. In Port-au-Prince, after ten years' experience, it is estimated[36]that close to 50% of the inhabitants (around 800,000 people) living in the poor neighbourhoods of the city have access to the new service. In Buenos Aires, in spite of the difficulties to calculate[37], after twelve years of concession (out of which the CDU was active for five years), it is estimated that 25% of the poor neighbourhoods of the concession area are involved in the program.

Besides the neighbourhoods access to drinking water, the main results of the programs are to be found in the impact they have had on public health. In Port-au-Prince, a study requested by AFD to CAMEP is presently under way: it aims at establishing sanitary safeguard tools based upon precise public health indicators. This request comes as an aftermath of the first results already shown in the UNDP report[38]. This report stated that between 1994 and 1999 there had been an increase of more than 300% in the number of households having access to drinking water, which allowed to imagine very positive impacts on the sanitary level of the neighbourhoods. In

[35] Labor costs low or non-existent, a lot of "pottering" about to recover materials, transfer of certain costs to the municipalities (tools, heavy works).

[36] The last population census was carried out by Institut Haitien de Statistique et d' Informatique (IHSI) in 2002. However, it is always extremely difficult to obtain reliable data on the number of inhabitants living in poor neighbourhoods of the agglomeration, for a number of reasons. These are essentially linked to the census methodology: on the one hand, one cannot be sure that the census takers have been present in all neighbourhoods. On the other hand, the methods used to bring awareness to the people on the importance of the census were not finalized (many refused to be questioned, no specific link to the poor neighbourhoods).

[37] Data vary according to the calculation method: technical connection to the network and/or commercial integration; the company priority has been the technical access to the network, it only gradually defined an economic access to the service policy (specific tariff, collection of bills), which is presently being implemented.

[38] "The different studies agree to say there has been a significant increase of access to drinking water, around 50%, since the end of the Duvalier era (…)". In urban areas, this increase may be explained by the ambitious programs creating paying public taps in Port-au-Prince, financed by international cooperation in the metropolitan of Port-au-Prince in close cooperation with CAMEP. Indeed, public taps represent the water source for 64,5% of the households in the metropolitan area compared to 15% in 1994 (UNDP, report 2003).

Buenos Aires, a study carried out by the Stanford University revealed an infant mortality drop of 25% in the municipalities of the cluster area where the water services had been delegated to a private operator (Galiani, Gertler, Schargrodsky, 2002).

One of the most eloquent qualitative results is certainly the growing role of the "poor neighbourhoods" program within the general management structure of each company (CAMEP and AASA). The professionalization of the teams as well as the operational progress made have contributed to acknowledging internally that the projects are indeed legitimate. It is interesting to note that in Argentina, since the unilateral violation of the concession contract provisions (by the government) after the January 2002 devaluation, the main expansion projects established in the last five-year plan have been either slowed down or cancelled waiting for the results of the renegotiation of the contracts. Only the expansion projects in the poor neighbourhoods continue to make progress and to provide new customers to the company.

Conclusion

This comparative study allows to identify the various obstacles encountered in the field and to prioritize their importance following two tiers: on the one hand those obstacles which actually prevent the program from moving ahead or jeopardize its sustainability and, on the other side, the problems which, although they may be essential for the execution of the projects, may ultimately be used in order to achieve better operational results.

After the fact, three parameters come out of the analysis:

- the confidence placed by the decision makers (be it managers or regulators) in these initiatives;
- the political will of the public authorities; and
- the social know-how of those participating.

These are the three *sine qua non* conditions for the programs to succeed. This conclusion does not however preclude other essential parameters from being taken into account for a proper deployment of the programs, such as: payment capacity / payment will of the population benefiting from the service, water availability, financial investment capacity and management systems, the profile of the neighbourhoods and technological know-how. It is simply the way to revisit the projects' priorities in the development sector.

Obstacle No. 1: Scepticism vis-à-vis projects

Whether we are dealing with the public management project in Haiti or the public-private partnership in Argentina, none of the operators did initially believe the program was feasible, especially from a commercial perspective.

This scepticism vis-à-vis the poor neighbourhoods supply programs has its deep roots in the collective unconscious of our societies. The prejudices underlying it deal mainly with the will of the poor populations to pay for the services they request, and, by analogy, the will they have to be inserted in society. Those who are "sceptical" underestimate the stakes of this integration for the marginal populations.

However, both experiences have shown, in practice, that the poor populations were willing to walk the extra mile to prove their will to pay and their determination to be integrated as full-fledged customers to the company.

Paradoxically, it is the public utility (CAMEP) that had the least difficulties to enter a commercial rationale. It probable became aware of the symbolic dimension of this rationale and

its importance for the sustainability of the program. On the other hand, it understood that the political benefit of the operation was to be found in the acknowledgement of a citizen status to the poor neighbourhoods' inhabitants by making them customers of the state-owned company.

The private company (Aguas Argentinas) found it difficult to identify this type of gain, as the most visible benefits provided by these supply programs were rather social and political in a nature. Hence, for the company, there was no direct valued added whatsoever. The initiative of the program was left at the discretion of the company, guided by its vision of the moment. The absence of the public authorities when time came to clearly define a social policy at the scale of the concession came on top of the reluctance of the company employees and managers to work with this new segment of customers, a priori considered non solvent and therefore non strategic. This absence from the public player in the decision-making process could already be strongly felt upon reading the concession contract (no expansion to the neighbourhoods where there was no existing urban grid, no terms of reference for the company relating to the internal installations which were previously in charge of the state-owned utility, OSN).

Scepticism is a hurdle difficult to overcome when only positive and promising operational results can overturn the feeling. However, scepticism very often comes from the decision-makers themselves at the time the programs were launched. In spite of positive results, there are always arguments to justify the withdrawal of the decision-makers from the programs. For example, when projects are too personalized they can be used as a last resort argument to explain why the project can not be sustained or simply the excuse to avoid supporting the experience.

Obstacle No. 2: Lack of political will of the public authorities.

In Haiti, the will and support of the company made it easier to deploy the program. The company adopted a vision both political and operational of the initiative. Besides, its low investment capacity did not hamper the political will of the company managers.

Conversely, in Buenos Aires, however high the financial capacity of the manager it was not in a position to offset the lack of political determination. Although this political blur cannot be blamed on the private operator, the experience showed that this situation had weakened the program and its economic profitability. On the other hand, the image problems of AASA, shown as a managing company that did not provide solution to recurring problems, had a tendency to reduce its legitimacy. As the water and sewage service is certainly the most sensitive of public utilities, the present questioning of AASA, in spite of the fantastic technical and commercial improvements, is, from that perspective, unique. The strategic choice of AASA to set at the same priority level the poor neighbourhoods projects and the service quality standards for all (improvement of the quality of service, upholding internal employment level, etc.) confirms the symbolic importance of the topic. The political will of the public authorities is therefore a fundamental condition for the success of such a project.

Obstacle No. 3: The lack of social know-how.

The third determining factor for the success of the programs is the social know-how. In the Haitian projects we were able to observe that the social engineering work became essential from the very moment the projects were identified. The systematic *social feasibility* study, set as a condition and the first stage of the project, shows a new and professional approach. We find here the same principles found in AASA's "participative management models" prerequisites, including the notion of *informed demand*.

The importance of a professional approach at a social level, placed at the same rank as the technical, commercial or institutional dimension, can be seen from the fact that a vocabulary

typical of engineers was adopted, but then for the social field: "social feasibility study", "procedure manual", "methodological process", "social engineering", "guidelines", etc.

Table No. 11 – Social know-how: players and funding

	Port-au-Prince		Buenos Aires	
Players	1 NGO, the GRET, (since 1995) 1 special CAMEP unit (since 1998) 1 technical consultant, Hydro Conseil (specific tasks)	10 years 6 years	1 NGO, IIED-LA (1994-99) 1 technical consultant, Hydro Conseil (1999) and other specific tasks 1 special unit, CDG (since 1999)	5 years 1 year 5 years
Funding	AFD and EU funding: since 1995	10 years	funding by IDB (1999) and self-funding by SUEZ since 2000	

As far as the sustainability of the projects is concerned, the delegation of responsibilities in the field of technical and/or commercial management becomes a fundamental dimension when talking about supplying populations from the poor neighbourhoods and also allows for lowering the costs. However, the degree of such a delegation may vary according to the country or the local social and cultural characteristics. This essential risk, inherent to the delegation of responsibilities, is the potential trail followed by the intermediate organizations (neighbourhood committees, community representatives), which fully justifies the need for our projects to become professional. This is what is at stake with this new discipline called "social engineering".

This is an approach calling for a high level of professionalism, which goes exactly against a charity and voluntary approach of the poor neighbourhoods projects. When talking about sustainability of the programs, the prejudice that says that working in the poor neighbourhoods is in the realm of voluntarism must gradually be replaced by the necessary acknowledgement of competencies specific to those specializing in development.

The objective results achieved by these programs allow to confirm the feasibility of these projects and the possibility to carry them out in time, at reasonable costs and within a perspective of sustainable access to the service, under certain conditions:

- Political agreement is prior to any project implementation, where the interest of all of the players meet in the famous "win-win" logic of shared interests;
- The initial stage of that political agreement with all of the players calls for a clear definition of their roles and responsibilities, whatever the framework of the project. It does not only involve the managing company but also the definition of the role of the state, of the civil society and both the public and private international sectors;
- The fact that "macro" coverage goals have been reached in both programs means that there is know-how even though it is still little known and acknowledged. The social engineering is simply the operational stage of the development principles that have been voiced for decades. It calls for an initial investment that will become profitable with the utilities remaining there for the future and by the direct –commercial – and indirect – public health and governance – benefits generated by this social and professional project.

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Tables, figures and insets

Acronyms and abbreviations

AASA	Aguas Argentinas Sociedad Anónima
AFD	Agence Française de Développement
CAMEP	Centrale Autonome Métropolitaine d'Eau Potable
CDU	Community Development Unit
CDD	Community Development Department
DC	Developing Country
DWS	Drinking Water Supply
ECHO	European Community Humanitarian Office
ENPC	Ecole Nationale des Ponts et Chaussées
ETOSS	Ente Tripartito de Obras y Servicios Sanitarios.
EU	European Union
GRET	Groupe de Recherche et d'Echanges Technologiques.
IDB	InterAmerican Development Bank
IIED – LA	International Institute for the Environment and Development - Latin America
INDEC	Instituto Nacional de Estadísticas y Censos
LATTS	Laboratoire Techniques, Territoires et Sociétés
MPG	Participative Management Model
NGO	Non-Governmental Organization
OSN	Obras Sanitarias de la Nación
PPP	Public-Private Partnership
SOLAM	Solidarity for Lavi Meyo
SU	Universal Service
UADE	Universidad Argentina de la Empresa
UBN	Unsatisfied Basic Needs
UCQD	Poor Neighbourhoods Coordination Unit
UMLV	Université de Marne la Vallée
UNDP	United Nations Development Program
UNICEF	United Nations Children's Fund
WHO	World Health Organization