

Restructuring the Water Service in Port-Au-Prince Shanty Towns

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Programme Context

What is at stake is a rapidly increasing demand. Port-au-Prince is a city of 2 million inhabitants that has developed rapidly over the last 30 years. The population has increased tenfold, following a massive exodus from the countryside, but the distribution network for drinking water has failed to grow accordingly.

Sufficient Water Resources

The city has a total of 110,000 cubic metres of water per day, or 55 liters per inhabitant per day. This amount of water is sufficient, considerably higher, for example, than for a city such as Dakar, Senegal (with only 38 liters per inhabitant per day), which is considered to have a good water service. Therefore, the problem in Port-au-Prince is not one of water resources, but rather of organization and distribution of public service. Despite the abundant water supply, the water service in Port-au-Prince operates very inefficiently, with half the inhabitants receiving no water service at all.

Only 10 to 12% of families are connected to the public water supply in their homes and those who are connected receive water for only a few hours a week. Since 1994, standpipes have not been functioning regularly. CAMEP, the public service company, is heavily in debt.

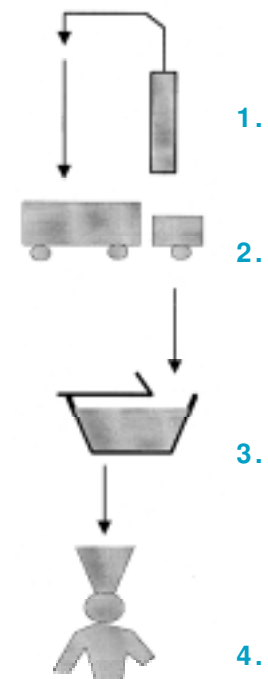
Proliferation of Private Operators

In response to these deficiencies, Port-au-Prince has seen a sharp increase in water distribution in the private sector. Half a dozen private tubewells utilize hundreds of trucks to provide water to thousands of private water tanks in the city. Most of this water is intended for resale to users. The water tanks have replaced standpipes, neglected by the public service.

Many private individuals resell water from their homes, and a number of them run clandestine operations. The total length of these alternative distribution networks has been estimated at 600 kilometres, or triple the length of the public distribution network. These private operators meet the water demands of the underprivileged fairly well, but at an exorbitant cost: \$3 – \$4 per cubic metre, compared to \$0.5 for water from the public network.

Levels of Service

1. *Private tubewells:* Water is sold wholesale (in trucks of 5 to 20 cubic metres), at a price of \$0.1 per cubic metre. Clients are truck owners who resell the water in Port-au-Prince, or company owners who get water more cheaply from the tubewells than from the public system.



Levels of service

2. *Trucks.* Water is resold at wholesale rates to owners of private water tanks at a price of \$0.8–\$1.5 per cubic metre. Clients are retailers who resell the water in their neighbourhood, or private individuals who are not receiving regular water service from the public system.
3. *Private water tanks.* Water is sold retail (in buckets of 15 to 25 litres) at a price of \$2–\$3 per cubic metre. Clients are water carriers who then resell it from door to door, or private individuals who use it for their own needs.
4. *Water carriers.* Water is sold retail for \$3–\$5 per cubic metre to private individuals who lack the means to finance a private hook-up, who do not have time to look for water outside the home, or too weak or old to fetch it themselves.

Basic Programme Data

Location: 14 shanty towns (210,000 inhabitants) in Port-au-Prince, capital of Haiti

Financing: European Union (ECHO and DG VIII) and CFD (\$3m)

Manager: CAMEP (public company)

Programme leader: GRET (French NGO)

Other partners involved: HYDRO CONSEIL, GATAPHY, SOLAM, SICA, SOE and 4 Haitian civil engineering companies.

Programme Objectives

In such a difficult context, the programme headed by GRET (with technical assistance from HYDRO CONSEIL), aims specifically to supply water to the shanty towns that is, those areas that do not yet have a public water service or distribution network. The aim

is to establish a distribution system through paying standpipes, to be managed by community associations. One of the difficulties encountered is that these neighborhoods lack an infrastructure; houses have been built illegally, without title deeds, and there is no urban planning (there are no roads suitable for vehicles).

Description of the Programme

The activities summarized here correspond to three successive programmes, financed by the European

Union (ECHO, DG VIII), and the CFD. These programmes have reached 14 neighbourhoods in Port-au-Prince with 216,000 inhabitants.

Technical Principles of Network Construction in Neighbourhoods Without Access to the Public Water Supply

The installation developed by HYDRO CONSEIL with its partners (GATAPHY, SICA, CAMEP) is based on the following principles:

- Water is provided to poor neighbourhoods by an urban network managed by a public operator (CAMEP), avoiding the need to use private transportation; the networks installed in the neighborhoods are linked to the main urban network, which is the only one that can provide water of good bacteriological quality.
- Link-ups to the CAMEP network are equipped with a meter, which is where involvement of CAMEP and the Committee ends.
- As the CAMEP network only has water pressure a few hours a day, reservoirs will be constructed corresponding to at least 24, and preferably 48 hours' consumption at the standpipes, so as to maintain the flow to the neighborhood network, even during service cuts in the main network, which will reduce the risk of contamination by the infiltration of water that has already been used.
- Water is distributed to users through standpipes, where it is sold at an average cost of \$1 per cubic metre, a considerable sum for the poorest families but affordable for most families in shanty towns, who previously had purchased water at two to four times this price.
- Particular attention has been paid to technical surveys of the networks, in order to avoid conflicts over land rights, and to reduce the risk of break-downs, which are difficult for the neighbourhood committees to deal with; these surveys have been awarded to local firms.
- Following a restricted invitation to bid, the studies and construction work on the networks, reservoirs, and standpipes were awarded to private local companies. The services of these companies were evaluated by an independent monitoring service in Haiti (SICA).

Neighbourhoods where the networks were installed in 1995/ 1996 (ECHO)

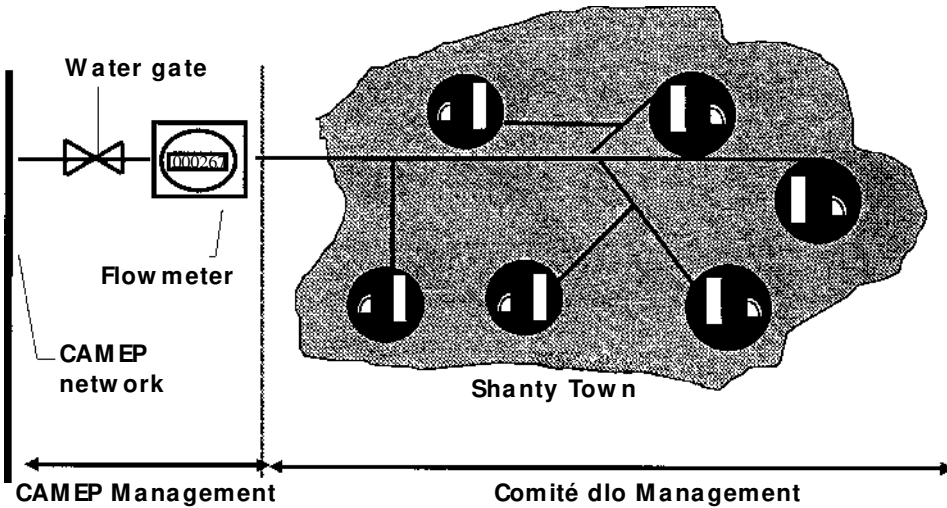
Neighbourhood	Population	Date started	No. of fountains	Distribution network installed	
				Length (m)	Reservoirs (m3)
Montjolly	8,000	1995	5	1,200	50
Cité l'Éternel Nord	20,000	1995	4	2,000	48
Cité l'Éternel Sud	20,000	1995	4	2,000	36
Baillargeau	12,000	1996	3	1,000	36
Desprez	4,000	1996	2	300	24
Solino	25,000	1996	2	600	40
Tichéri	6,000	1997	2	600	24
Drouillard	15,000	1997	4	2,000	48
Total	110,000		26	9,700	306

Neighbourhoods where the networks were installed or reinforced in 1997/ 1998 (ECF/ EU)

Neighbourhood	Population	Date started	No. of fountains	Distribution network installed	
				Length (m)	Reservoirs (m3)
Bois neuf	10,000	1997	4	2,000	48
Decayette	15,000	1997	6	1,800	100
Villa Rosa	8,000	1997	7	2,000	99
Delmas 32	50,000	1997	11	4,500	500
Trou sable	15,000	1997	6	1,600	60
Solino	not given	1998	2	360	34
Cité Marc	8,000	1998	3	600	36
Total	106,000		39	12,860	877

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■ GRET plays the role of arbitrator and facilitator between the committees and CAMEP or among various community organizations in the neighbourhoods.

Results

Approximately 20 kilometres of the network have been constructed, providing water to approximately 60 standpipes. For 1998 it is estimated that 50 more water tanks and 500 homes will be hooked up to the system. 1,200 cubic metres of reservoirs have been constructed in 14 neighbourhoods.

These 14 networks make it possible to distribute 500 cubic metres per day, thus providing the main water supply to 50,000 inhabitants (at a rate of 8 litres per inhabitant per day), and an additional supply to 150,000 more inhabitants. In effect, these standpipes also tend to regulate the price of water in these neighbourhoods by providing the service at \$1 per cubic metre, compared to the rate of \$3–4 per cubic metres formerly offered by private retailers.

Committees in 14 neighbourhoods have been managing the water service for more than two years. They comprise leaders of community organizations, without exception (political parties, churches, youth groups, women’s associations, networks of local dignitaries). These committees have shown great ma-

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Management of Water Distribution System by Users’ Associations

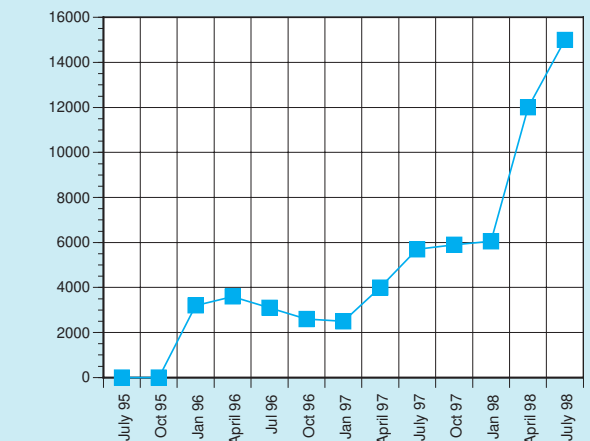
The intervention method developed by GRET with its partners (SOLAM, GATAPHY, SICA, HYDRO CONSEIL) is based on the following principles:

- Analysis of the demand for water in the various neighbourhoods is carried out in close collaboration with CAMEP, as are technical feasibility studies (flow and available pressure in the network) and social studies (neighbourhood consensus).
- Water is bought from CAMEP at a wholesale price of 5.3 gourdes per cubic metre (approximately \$0.3 per cubic metre). The water is distributed to users through standpipes where it is resold at an average price of 15 gourdes per cubic metre (approximately \$1 per cubic metre). Based on income from the sale of water at the standpipes, each water committee pays its bill to CAMEP. Since the project’s inception, no such bill has gone unpaid.
- The water is sold by vendors (male and female) hired and paid by the water management committee in each neighbourhood.
- These committees are made up of representatives from all the community organisations in the neighbourhood. They decide how work will be

carried out (e.g., choosing the number and placement of standpipes, facilitating construction work, etc.). They organize the development and maintenance of the network, under contract from CAMEP, which provides water at the neighbourhood point of access. However, the responsibility of CAMP ends with the installation of the general meter in each area and CAMEP does not provide services in the neighbourhood.

- The neighbourhood committees are formed after an intensive mobilisation and training process carried out mainly by GRET and SOLAM, a Haitian NGO specialized in social mobilisation work in shanty towns.
- The gross profit margin achieved by the committee from the sale of water (approximately \$0.7 per cubic metre) makes it possible to pay the water sellers, provide a small payment to members of the committee, and finance maintenance of the network. The remaining profits (15–20%) are invested in other public interest facilities in the area (drains, walkways, sidewalks);

Volume of Water sold by CAMEP to the first eight water committees (quarterly averages expressed in cubic metres)



turity in dealing with conflicts within the community and managing funds: the rate of payment of CAMEP bills is 100%. Using profits from the sale of water, committees have financed approximately 15 small community facilities (sports grounds, meeting rooms, walkways, drains, showers), which serves to strengthen their mandate among the population.

The volume of water distributed each day by the neighbourhood committees has risen considerably over the past two years, which shows that the network meets the real needs of the population. However, on the consumption curve shown on the previous page, a considerable reduction can be noted during the rainy season, which shows that the programme is reaching populations with very limited incomes. As soon as an inexpensive supply of water is available (water collected from rooftops, for example), this particularly disadvantaged group avoids paying for water from the standpipes.

Impact and Conclusions

Difficulties Encountered

Water pressures in the CAMEP network is weak, irregular and unpredictable, which constitutes the main obstacle to increasing the amount of water distributed in each neighborhood.

The legal status of the land is extremely ill-defined (no surveys have been carried out), which results in protracted discussions and different arbitration for the selection of each site. The

CAMEP employees are not well trained in dealing with clients, water meters and billing; and it is therefore difficult to get them to adopt an approach to public service which seeks to adapt itself closely to demand, as they are used to selling water services to the neighbourhoods and even to pirate link-ups.

Social mobilization in the most disadvantaged areas of Port-au-Prince is made very difficult by an explosive political and social environment. In 1994, few local NGOs had the necessary experience or capacity for such an endeavour, which led GRET to develop a local structure that gradually is becoming specialized in the area of social marketing in shanty towns.

Some Pleasant Surprises

The program has enjoyed immense support from CAMEP (in particular from its directors), although in principle, it would not appear to be part of the strategy CAMEP has pursued with regards to the programme's financial backers and their influence.

The joint commitment of all the community organizations, whose history of lively competition and conflict is well-known in Haiti, also should be noted. Obviously, the distribution of water is a sufficiently important and concrete necessity for these organizations to quell their rivalries to obtain a tangible result.

We were able to award the surveys, construction and monitoring of all the work carried out to surveyors and firms in Port-au-Prince, who had proven their competence in the extremely unusual conditions of the shanty towns, despite their limited experience in such a relatively new field.

Competition from the new standpipes has been accepted by owners of the water tanks, and there have been no cases of sabotage. This has been made possible by strong mobilisation of community associations who protect the networks.

The sale of water, even at a relatively moderate price (30–50% of the price previously charged by private retailers), provides a considerable profit margin (36% of revenues) to the neighbourhood committees, making

the programme self-financing. Once funds have been set aside for the renovation of existing installations (20% of revenues) there remains a relatively substantial amount which is reinvested in other public work installations, thus contributing to the development of the neighbourhoods and their integration in the urban fabric (drains, bridges, walkways, sports grounds, showers, community facilities). Around fifteen installations of this type have been built, based on exactly the kind of local financial investment that is required from the parties involved.

Possible extension of the programme

Much work remains since an estimated 500 to 1,000 standpipes are still needed to satisfy the demand in Port-au-Prince. Fortunately, many donors are interested in the programme, as it is one of the rare examples of a successful public service rehabilitation since the return of democracy in Haiti in 1994.

However, in order to expand the system, CAMEP will need to adopt this approach into its global strategy. To a public water distributor, the advantages of such a programme are: a wider clientele thus more revenue, an improvement of its public image through servicing a wider portion of the population, and a decrease in vandalism of the network.

The expansion of the system will also depend on the enthusiasm and the performance of the local managers and their ability to succeed at promoting full participation by stakeholders. In this regard, GRET and HYDRO CONSEIL have been playing a pivotal role in the implementation of new water distribution methods and usage. However, this role should soon be taken over by local communities for integration in their own strategies. 🌍

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How the money collected by the water Committees is used

