

Cartagena de Indias





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Institutional Reforms to Improve Water Supply in Colombia and specifically in Cartagena de Indias

Since 1995, an important institutional reform has been led at the national level to improve water and sanitation services in the whole country. In Cartagena de Indias, thanks to Law 142, a PPP with AgBar has been set up, which gave birth to Aguas de Cartagena. This case study will highlight how the process between the Government, the Municipality, Aguas de Cartagena and the Banks was managed, with regards to social equity and environmental awareness.

Chair: **Ms. Nola Kate Seymoar**, Director, International Center for Sustainable Cities, Vancouver, Canada, evidence on the social dimension as related to urban services as developed in the Hong Kong seminar

Discussant: **Dr. Arlene Inocencio**, International Water Management Institute-Africa, Pretoria, South Africa, evidence on the local authorities' role in managing urban services, as developed in the HK seminar.

Ing. Carmina Moreno Rodriguez, Ministerio de Desarrollo Economico, Direccion de Agua Potable y Saneamiento Basico, representing the central government

Key objectives for the water sector. Law 142: criteria for efficiency in terms of planning, regulation and supervision of basic services; market approach assigning a key role to private capital and technology. Current role played by the central Government in the PPP and its position regarding bank funds.

Ing. Diego Humberto Caicedo Ortiz, Superintendente General, Superintendencia de Servicios Publicos Domiciliarios, representing the regulatory framework

There are two regulatory institutions in Cartagena. Coordination of their roles at different levels. Exercise of their authority over the Municipality. How are tariffs decided and approved? Where does citizen representation appear in the regulatory framework? How do they consider the combina-

tion of PPP and Bank loans? Improvements to be made. Monitoring of the social, environmental and urban objectives.

Mr. Luis A. Pinzon, Environmental Manager, Aguas de Cartagena

What were ACUACAR's targets when negotiating the joint venture arrangement in 1995 and the Bank loans in 1998? Risks perceived then and changes since? Operator's view today of its involvement in the joint venture? Benefits and disadvantages of the PPP? How are the social, environmental and urban dimensions taken into account?

Mr. Andrew Nickson, School of Public Policies, The University of Birmingham, United Kingdom
Overall evaluation of the experience of the Cartagena de Indias partnership.

Discussion



The Social Dimensions of Urban Service Delivery

Dr. Nola-Kate Seymoar

President and CEO

The International Center for Sustainable Cities, Canada

Introduction

It is a pleasure to be in Chile again and I am honored to have been invited to summarize part of the discussions from the Hong Kong Seminar on Sustainable Urban Services. I will focus on the social aspects of these cases and build a list of dimensions and identify the innovative practices and challenges presented. I hope that these or similar categories might provide a framework for examining the social dimensions of service delivery in other future case studies.

The Nature of the Social Dimension

In general the social dimension of urban service delivery is less well developed, understood or planned than are the economic and environmental dimensions of urban sustainability. «Social dimension» refers to issues of social equity and quality of life. In Genevieve Dubois-Taine's introduction in Hong Kong she stated: «social sustainability has to do with social equity. This equity concerns the management of resources and distribution, the building and reinforcing of the well-being of communities, and the necessary access of all to decent life conditions.»

The Context of the Discussion

What were the equity and quality of life issues involved in the provision of water services in

Manila and Jakarta and in solid waste management in Hong Kong and Bangkok that provide the context for this study of the social dimension?

First, one notes there is a fundamental difference between the social impact of programs and public private partnerships (PPPs) in the fields of water services and solid waste management. In water, improved services almost invariably help the poor by providing cheaper water of better quality and decreasing the time spent in queues waiting for water, thus freeing both time and money of the poor to invest in other enterprising activities. In the field of SWM on the other hand, improvements in the pick-up, delivery and disposal of garbage may deprive scavengers of a living. Thus interventions to improve SWM must also focus on the provision of alternate livelihoods for the scavengers.

Access to clean or potable water is much more difficult for the poor than the rich. Dwellers in informal settlements usually have to pay for bottled water from vendors, whereas those housed in regular communities are served with piped water at a much lower cost. Access to municipal water and sewage services is usually limited to those who have land tenure.

Water transcends political borders and those who are downstream have less control over the quantity and quality of water available than do the upstream users. Balancing the needs of the users - commercial/industrial and residential also involves issues of equity.



Large scale water and sewer infrastructure projects are costly and usually require foreign investment, and loans. Local municipalities vary in their ability to raise funds to enter into public/private partnerships. Partners in long term concessions have a high risk of foreign exchange losses. Who should bear what portion of these risks?

Scavengers or waste pickers who often live and work on open dump sites are displaced when a city moves to a sanitary landfill. These people are performing a valuable service in the waste management system. Regulations banning their activities adds insult to injury by criminalizing rather than taking advantage of their survival skills and experience.

«Not in my backyard» and «not in my term of office» are two tendencies that deter effective solid waste management.

Lessons Learned and Challenges Remaining: The Social Dimension

It is within the above context that a brief review is offered of the successes and challenges of the social aspects of the cases presented at the Hong Kong Seminar.

Water

Improving Equity between Rich and Poor

• **Access to Piped Water.** The Jakarta case focused on improving water distribution by reducing Non Revenue Water (water lost to illegal connections, lack of meter reading, and leakage) which was estimated at 50% of total water use. The poor and industries use wells resulting in a deterioration of underground water through an intrusion of saline water and land subsidence. In Jakarta it appears that in the first three years connections for impoverished customers increased from 8,000 to 30,000. The overall increase in all customers was from 200,000 in 1998 to 280,000 three years later. Those who live on illegal land are not eligible for services.

The issue of services to the poor living in slums on unregulated land, without land tenure was successfully addressed in Manila, where residents in informal settlements that were not expected to be resettled within five years, were allowed to pay for the installation of piped water over a period of between 3 and 24 months. Maynilad Water Services Inc (MWSI) was still able to make a profit by installing pipes above ground and using a variety of distribution and metering systems according to the particular situation of the community. The residents received more and better water for less money and community involvement led to increased pride and «ownership» of the water service. The residents themselves began looking out for illegal connections and leaking pipes.

• **Access to Sanitation.** The pollution of water by solid and liquid waste is, and was, an enormous issue in Jakarta. One positive outcome of the economic crisis was that a large number of SME's that were polluting the river went out of business. PROKASI, a program to clean up the river through community involvement and action («through rewards and humiliation») had some results but was preempted by the economic crisis. The challenge remains to find ways to stop the contamination of the rivers and underground water in Jakarta's watershed.

In the Philippines, in the Paradise Village water and sanitation project of Medecins sans Frontieres (MSF), the issue of contamination of the water and flooding was successfully addressed through community engagement in construction of a water drainage system; education about hygiene, maintenance, environmental problems and solid waste management; and investigation of the issues around land tenure. The striking thing about the MSF project was that it was very practical - people could see the drainage system, they could see they were improving it and community participation led to pride in the results. Focusing on a tangible problem where practical efforts showed clear results

demonstrated the peoples' ability to improve their living situation. Community participation ensured ownership of the project and this was formalized through the creation of a Committee on Health and Sanitation that will help ensure the sustainability of the results. The project is addressing land tenure issues as part of the desire to strengthen the residents' ties to the community.

- **Access to Affordable Water: Water Pricing.** Pam Jaya, the government organization responsible for water services to Jakarta entered into a PPP with Ondeo and Thames Water in 1997. Due to the economic crisis and related events, the contract was renegotiated over a period of years. The issue of equity between the rich and the poor was addressed in the contract renegotiation which allowed increases in the tariff paid for water within a guideline of 4% of the person's income. This meant that there was virtually no increase in rates for the poor whereas the increase in rates for the higher end users was 43%.

In the Manila case example, the two concessions were granted to Maynilad Water Services Inc (MWSI) and Manila Water Company Inc (MWCI). Here, although the piped water was cheaper than previous water supply arrangements, there continues to be a perverse effect. The lowest rates are charged to those who use the least amount of water. Higher rates are charged to higher users. Thus community providers with high volumes of draw pay high rates - with no consideration of the number of households they serve.

- **Access to Decision Making.** Through out the discussions in Hong Kong frequent mention was made of the use of multi- stakeholder participatory processes. These processes or committees do improve access of marginalized peoples or groups to both decision makers and to the decision making process. When formalized they may serve as a buffer, ensuring stability when political changes occur.

The MSF project led by local and foreign NGOs stressed community involvement in the provision of sanitation and prevention of flooding. Again, community involvement led to longer term sustainability of results and increased community pride and empowerment.

Equity among Users

Equity between upstream and downstream users was an issue in both Jakarta and Manila and was not adequately addressed in either. The complexity of jurisdictions and the nature of watersheds demands an integrated approach to water management that has yet to be achieved in either metropolis. This is also the case in many jurisdictions in Canada. This issue is one of the remaining challenges in the cases we are examining.

Equity between Workers in the Private and Public Sectors

One of the issues in transferring a public utility into a private one, is the treatment of the former civil servants. Employee equity in the Jakarta case was addressed by allowing the public sector employees to move to the private sector company and maintain their level of income and job security, or take a «golden handshake» (severance package).

Equity among Generations

One of the significant elements of sustainable development is that it does not compromise the ability of future generations to meet their needs. This issue was not addressed explicitly by any of the cases presented, yet it is the underlying issue for much of the concern about water. Destroying the aquifer, drawing down too much water from wells and polluting the ground water from leachate or saline water, polluting the rivers and streams from sewage and garbage - all of these activities have long term intergenerational consequences. An unprecedented legal case regarding forests in the Philippines (the Oposa case) was used to illustrate the challenge when we ignore the rights of future generations to have safe and sufficient water, air and land.

Accountability and Assessment of Results

Independent Regulatory Body

In both the Jakarta and Manila case studies the establishment of an independent regulatory body to oversee the performance of the private sector partnership was featured. In both instances the existence of the body was a transitional step (neither were yet fully independent in the manner of their appointment). The body was viewed as essential to increasing public trust through increasing the transparency and accountability of the concessions operated by the private sector partners.

Consumers Perceptions

In Jakarta as part of the creation of an independent regulatory body, the interests of the customers (mostly women) were actively sought as part of the customer feedback and oversight process of the regulatory body.

In Manila, one very innovative aspect of involving the customers in the evaluation of services has been realized through a special World Bank assisted project - «Public Performance Assessment» project or PPA. As a way of reporting on the performance of the concessions, performance indicators were set up in five performance categories. User perceptions and ratings are gathered through consumer surveys and combined with information from the water providers. The results are shared widely with providers, users, Barangays, and LGUs, thus improving the transparency of the process and ensuring problems are identified early. The involvement of the community in assessing the outcomes of the privatization arrangement in Manila was a major innovation and greatly increased public awareness, transparency of results and stakeholder commitment to the process.

Solid Waste Management

In the case of Hong Kong, the social dimensions of SWM have not yet been addressed. HK does not charge for waste disposal and there are few incentives to minimize waste. The polluter pays principle has not been accepted. Public education campaigns

focus on recycling and environmental gains. The commercial sector seems a long way from embracing a triple bottom line.

In Bangkok a number of environmental NGOs have undertaken campaigns such as the Magic Eyes Campaign that have used a focus on Thai culture to clean up the city and the river. An innovative program of «Waste Banks» buy and sell recyclable waste products. Depositors receive credits or cash for materials and are paid when sufficient supplies have been received and are sold by the bank. By law waste picking has been banned from landfills, yet the practice is carried on at the transfer stations where collectors and pickers sort through garbage before it is sent off to the landfills.

During the Hong Kong seminar I described another integrated approach to SWM in four cities in SE Asia. The CIDA funded project involved working in each city with a multi stakeholder committee to identify the SWM priorities and develop a master plan. Technical assistance was used to upgrade and re-site landfills, school and public awareness programs were introduced to initiate recycling programs and a series of programs were developed to upgrade the learning and livelihoods of the waste pickers. The junkers were assisted to form cooperatives and start small business ventures using recovered materials. The social impact was high and the poverty of the waste pickers and junkers was reduced. This integrated approach addressed the social and economic needs of the people and improved the environment. The project was named an Ambassador Project in the Stockholm Awards in 2002.

Conclusions

The most innovative of the approaches to water and solid waste issues discussed in Hong Kong, have been those that have addressed social, as well as economic and environmental sustainability. This social equity lens may be useful in reviewing the cases presented from Cartagena, Mexico and Santiago. ■

The Role of Local Governments in Management and Delivery of Urban Services

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Introduction

This paper draws heavily from the 2001 Hong Kong Seminar presentations and discussions and is mainly a compilation of major points and issues raised. It highlights the roles and experiences of the local governments as well as lessons learned and remaining issues and challenges from the 4 country cases presented (Manila, Philippines; Jakarta, Indonesia; Bangkok, Thailand; Hong Kong) by type of service (water supply and sanitation, solid waste management). Hopefully, from this presentation, we can identify some parallel experiences and challenges and learn from each other.

Roles of Local Governments, Experiences and Lessons Learned

The Case of Metro Manila: the Local Government as Facilitator and Enabler

The contribution of local governments in Metro Manila water supply and sanitation was quite limited but nevertheless they contributed to the overall effort of providing service especially to the urban poor.

In almost all cases, both private concessionaires in Metro Manila had to work with barangays, the smallest political unit in the country.¹ Most of the coordination and linking is done with the barangay officials who mobilize the community so that the concessionaires can market the service, i.e., the barangay officials explained the project to the community and convinced the community to unite and cooperate in the project by agreeing to legalize illegal connections and extending all support necessary. The local governments facilitated and assisted in forming area associations where there were none.

Participation of the local governments ranged from giving recommendations for issuance of an environmental certificate of conveyance and the barangay project clearance to city/municipality permits to diggings, informing and mobilizing of constituents, waiving of fees, and to contributing of materials and assuming part of the project costs.

In the Metro Manila case, the local government served as a facilitator and enabler of the private sector provision of water for domestic use. This is especially evident in the acknowledgement of the private concessionaires of the contribution and support of city and local officials (especially barangay officials) as important factors in successfully implementing water projects in depressed and poor areas.

¹ Mayors were usually invited by the private concessionaires upon completion of the project and to the inauguration to promote a good relationship with the local government. According to both concessionaires' experience, the strategy helps in smoothing future interaction, such as getting digging and filling permits more easily for succeeding water projects.

The Case of Jakarta: the Local Government as Partner, Provider and Regulator

In the case of Jakarta, the role of the local government was quite complicated and substantial as a partner in the concession and therefore partly provider and yet also (initially) served as regulator. The DKI Jakarta City Government was one of the parties in the privatized water utility which initially took up the role of regulator until a body was appointed by the governor in 2001. Because of this set-up, there was perhaps some confusion in the roles of the local government as well as the private partners who were also supposed to operate and manage the utility.

As a partner, the local government was part of the decision-making which relates to management and operation and yet as regulator, it was tasked with ensuring that the private concessionaires deliver what were specified in the contract and that the interests of the public will be protected. Specific experiences on this aspect were the attempts of the private sector to increase prices to generate capital for further investment which have been consistently turned down supposedly in the interest of the public but perhaps also because increasing prices would be unattractive for politicians seeking reelection.

There was an issue of conflict of interest raised by the private sector and the need to ensure independence (and accountability and transparency in operations) for the regulatory body. There is a felt need to ensure that the chosen regulator would be able to balance well the needs of consumers and to protect them from private inefficiencies and the private sector's need to profit, be viable and operate sustainably in order to raise capital for service improvement.

The Case of Bangkok: Local Government as main Provider of Service

Bangkok Metropolitan Administration (BMA) is responsible for management of solid waste among other functions. Waste collection across the BMA

is done by its own workforce while waste transfer to the landfill and elimination has been contracted out to the private sector. Specifically, the Cleansing Department takes charge of waste collection together with the 51 districts in Bangkok. In addition, the 51 districts also managed the maintenance of the fleet of vehicles used in waste collection. BMA collects fees but has been charging much lower than the cost of operations.

In the Hong Kong seminar discussions, an important concern raised was the need for public sector (as represented by BMA) to play a role in supporting and encouraging people's participation in the development of the city beginning with the establishment of community plans to strengthen city and local communities and achieve and maintain cleaner environment.

The BMA is also expected to provide a clear framework for whatever contract arrangement it will enter into so that all parties will be clear on their roles and will be able to function well. Also pointed out was that in the case of Bangkok, implementation/enforcement of laws can (and should) play an important role especially in protection of the public's health through proper waste management and disposal.

There was recognition of lack of capability on the implementing agency especially the Cleansing Department in attracting private sector investments and in negotiating.

The Case of Hong Kong: Local Government as Provider and Enabler

Waste reduction has been identified as a top priority in Hong Kong's approach to sustainable waste management. The regional government's role is to safeguard the health and welfare of the community and protect the public from adverse environmental effects associated with improper handling and disposal of wastes by planning and providing convenient and cost-effective waste management facilities, proper enforcement of relevant legislation, as well as sustainable approach to waste management, in which less waste is

produced, and reusing and recovering value from waste would become a common practice. On encouraging recycling, the government is clear on its policy of not directly subsidizing the recycling trade but does so indirectly by allocating land. Discussed in the Hong Kong seminar was the role of government in providing the enabling environment for the private investors. By helping the private contractors acquire land (which is very expensive in Hong Kong) at more competitive rates, the administrative regional government is paving the way for the private sector to operate. The government basically helps in getting long-term land lease and better technologies.

Pricing/charging is still a major issue even in Hong Kong as it is in Bangkok in solidwaste management. While collecting a water charge may still be difficult in some parts of the world, there is a rapidly growing acceptance and understanding for the need to price water which cannot be said of solidwaste charges. Hong Kong has tried to implement solidwaste charges as early as 1995 but it failed because of strong oppositions from different players and stakeholders.

Remaining Challenges and Way Forward

Water Supply and Distribution

In the case of Jakarta, a point raised by one presenter was the need for national governments to allow cities to become agents of change by giving them greater authority and autonomy in providing the enabling environment for an independent and balanced regulation which will take into account interests of both the general public as well as the private concessionaires to achieve common goals.

On the issue of conflict of interest raised by the private sector and the need to ensure independence, accountability and transparency in the reg-

ulatory body, one suggestion put forward was the hiring of highly qualified and capable members who have no direct stakes in the utility to achieve greater independence. It was also mentioned that the power to select members in the case of Jakarta will be eventually given to the city counselors in the next round of selection. In this instance, the city will play a very important role especially in taking into account the public's interests in decision-making by virtue of their «elective» position which would be specially «binding» near election time.

The case of Subicwater in Olongapo City and Subic Freeport Zone in the Philippines can be of interest for Jakarta's regulatory body. The parties to the water franchise agreement were given the power to recommend candidates for board members who were then to be approved and endorsed by all the other parties. The parties made sure that disinterested, highly qualified and capable professionals were recommended. In this way, the private concessionaire and the City of Olongapo as well as the major local construction company, which were the parties in the franchise, were able to ensure that the members of the regulatory body were highly qualified and whatever biases they may have at the beginning can be neutralized by the overall composition of the body.

In the case of Metro Manila water supply and sanitation, it was the national government through the public water utility which entered into agreement with two private concessionaires and although the local governments' role in water supply and distribution was not substantial, it facilitated and helped deliver services especially to the poor.

By actively participating in service delivery and management, the local governments are in fact contributing to poverty alleviation. They facilitated provision of water for the poor and poor communities which in turn was a potent tool for alleviating poverty as it impacts on health, income and consumption, and gender and social inclusion.

Solid Waste Management

Solid waste management is still very much identified or perceived by the public as largely a (local) government responsibility. However, in recent years there is a recognition of changing government roles as the sole provider of basic services to enabler, facilitator, mobilizer of resources, and partner. This changing role is especially evident in the provision of some major urban services especially in water and sanitation and other sectors (electricity and communications).

The common concerns with solidwaste are the lack of capital and financing to build the basic infrastructure and to provide quality, wide ranging and sustainable service. This solid waste management problem is made more complicated by lack of dump sites problem and limited technologies (specifically with the banning of incinerators), an undisciplined (or perhaps less aware) public which results in indifference and non-cooperation in government introduced programs. On the lack of funds, local governments are expected to raise the capital to finance solid waste management by raising more revenues, borrowing, and tapping private sector finance. Because of this lack of funds, there is a feeling of discontent amidst mounting problems of solid waste disposal together with its adverse health and environmental consequences, with «government just not doing enough.»

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In the Hong Kong seminar, there was also a mention that the ability of local governments in promoting local infrastructure being highly determined by its capacity to generate revenues. With decentralization and greater local taxing power given to local governments, it can make good use of this prerogative to generate revenues for important infrastructure projects for urban services. To raise revenues, one specific suggestion was to tax or price garbage collection and disposal. There are however, inherent problems with this option because while in water and electricity non-payment means simply cutting off of service without adversely affecting others, non-collec-

tion can impact on the environment and health of others in a community or locality. Making this doubly difficult is the fact that majority of the population still think that this service is the responsibility of the government and therefore do not see the reason for paying for this service. The major challenge facing local governments is therefore finding innovative ways of introducing and formulating solid waste taxation or pricing acceptable to the public and which would be large enough to cover investment needs to provide quality service. The importance of educating and convincing the public including the politicians and legislators has been pointed out. It appears that pricing can be a key solution to the problem of lack of financing and resources and the Hong Kong government continues to find a strategy for pricing in ways that would be acceptable to the public.

The option of borrowing or use of long term credit to finance local infrastructure was also raised in the Hong Kong meeting. However, it was admitted that there maybe difficulties in getting access due to the absence of local financial institutions which are independent of the national or central government and which can lend the amounts required by the local governments. Credit worthiness is something that the local governments need to establish to be able to tap this source.

Given difficulties in raising substantial revenues (because of heavily subsidized pricing) and financing through borrowings, a third option was discussed. With more and more private sector in «traditional» government functions such as provision of water and sanitation among others, there is a clamor for tapping this alternative source of finance. It is acknowledged that the governments can mobilize resources from the private sector as well as from non-government organizations even in waste management and disposal. However, involving private sector in urban service provision does not mean that the government is abandoning its role of protecting overall social welfare. The private sector will always have profits and own sustainability as its main objectives while the public on the other hand needs to be assured of some level

of service to attain or maintain a desirable state of living. It would be government's role to ensure that this balance in private and public sector needs be achieved and maintained. More importantly, that in this role the local government must assume accountability and aim for transparency in its transactions and dealings with the private sector to encourage and generate public trust and support. In addition to public health objectives, environmental management has also been raised as an equally important objective in provision and managing of urban services. While this may seem to be more of a national government role, with decentralization, local governments have been given greater responsibility in managing the environment and the natural resources. Provision and management of water and sanitation as well as solid waste certainly impact on the environment. And because these services have indirect impact on others and even the general public, the government has an important role in this since not the general public nor the private sector will on their own take into account the negative impacts of their actions on others or

the environment. While the Hong Kong seminar roundtable discussion had a consensus on this protection of the environment aspect in provision of urban services as still mainly government, it was emphasized that in carrying out this role the government has to exercise transparency and accountability.

A more substantial argument raised in Hong Kong over and above the immediate and most direct responses to the lack of necessary urban services is the longer term view of the problems. Specifically, for the solid waste problem there was an agreement in the body that «education» is the long-term solution which may ensure sustainability. What role local governments have in this aspect is not clearly drawn in the discussions but perhaps this is a call for local governments to be more active and committed in advocating these specific concerns of health and environmental implications of providing and managing of urban services (water supply and sanitation, solid waste management) to become part of basic education. ■





Public Policy for the Water and Basic Sanitation Sector - the Cartagena Case

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Background Information

The State was the exclusive provider of utility services in Colombia in the '50s, and it was the only entity responsible for such services.

«Decentralized Institutes» were regulated in 1954. These institutes are state, departmental and municipal bodies that are given budgetary, administrative and personnel autonomy in order to protect them from electoral struggles. Some municipalities took advantage of this to consolidate their municipal utility companies, which was the case of Cartagena. Although one of the purposes of this measure was to keep political influence away from the entities providing the public services, these companies gradually became politicized, which increased their inefficiency and corruption. Rates were affected by the high labor costs, and this in turn resulted in a serious deterioration of the services.

Significant changes in the country's macroeconomic management and in the parity of the peso took place in the mid 1980s. This had a tremendous effect on companies that had foreign currency loans, leading them practically to cease payments. The government was forced to create a stabilization fund, transferring resources from other sectors. This mechanism was called FODEX and it mainly served the larger companies.

At that time there was significant political dissatisfaction, particularly in small localities, where the people protested against the Central Government, accusing it of being negligent and inefficient in the administration of the utilities they were responsible for.

The administrative reform of the State started to acquire form. The reform was aimed at transferring the responsibility for utilities to the local links of the state apparatus.

Colombia was finally decentralized in 1987, transferring the responsibility for utilities to the municipalities. Subsequently, the current political constitution of Colombia of 1991 authorized the participation of the private sector in the provision of water and sanitation services.

In the early '90s the water and sewerage companies faced serious institutional and financial problems, which eventually became the greatest restriction to increase service coverage and maintain operating levels. Their institutional problems derive from not having modernized their administrative procedures and inefficient managerial capacity. The companies' management is usually made up of people with a high political commitment; therefore, many of the decisions adopted do not have a technical, financial or institutional basis.



The problems of coverage, poor service quality, and operating inefficiency went hand in hand in most of the companies with a severely deteriorated financial situation. Excessive costs due to operational inefficiencies were added to extremely low rates, resulting in a chronic incapacity to generate funds to replace systems and expand service.

Thus, the characteristics of the water and sewerage sector in the early '90s had the following characteristics:

Insufficient coverage tending to stagnation.

- Low quality service
- Great operating inefficiency
- Extremely low rates
- Significant dependence on public funds to finance investment
- Deficient management
- Low investment capacity
- Unreliable information systems

The 1991 Constitution introduced basic principles related to the nature of the utilities, the role of the public and private sectors, user rights and duties, and costs and subsidies. The second paragraph of article 365 of the Political Constitution states: «Public services for domestic use shall be directly provided by each municipality, when the technical and economic conditions of the service permit and advise so, and the departments shall fulfill the functions of coordination and support.»

In other words, the municipality becomes the entity responsible for providing the service and the department has no executive action, but only coordination and support. This new definition of responsibilities absolutely changed the country's work strategies, because it was left with a numerous and heterogeneous municipal market. On the other hand, the need for an efficient service created new ways of working, both at the local and central levels.

In summary, clear guidelines were drawn up in relation to efficiency, private participation, decentralization, regulation, surveillance and control, which must be complied with whatever the system chosen by the municipality to furnish the services. It also contemplates and determines the

following basic elements for managing domestic public services.

- Economic activity and private initiative are free within the limits of common good, and free economic competition is a right that implies responsibilities for everyone
- The municipalities are responsible for ensuring an efficient service. Organized communities, private companies or the State may supply the services
- The State is responsible for regulation, control and surveillance
- Rates are determined on the basis of cost, economic efficiency, solidarity, and income redistribution
- Competition is introduced as the way to achieve efficiency

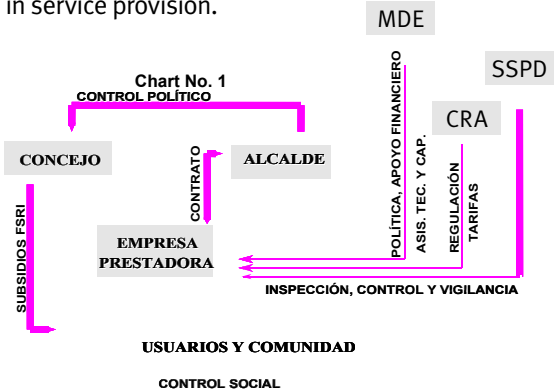
Within the framework of the Constitution of 1991, the Congress issued Law 142 of 1994, known as the «Domestic Public Services Provision System», based on principles of economic efficiency, financial capacity and income redistribution.

Public utility companies were passed to the private law regime and were encouraged to become stock companies in order to have greater administrative and financial autonomy, rationalizing them and making them more efficient.

Institutional Framework

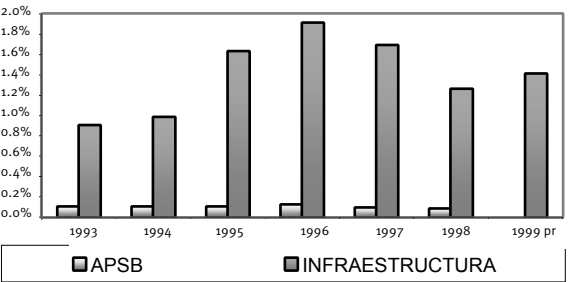
After the issuing of the political constitution of 1991, the municipalities have the direct responsibility of guaranteeing the efficient provision of public services in terms of coverage, quality, service continuity and costs. The services may be furnished directly by the municipality, organized communities and private parties. The State is responsible for regulating, overseeing and controlling, and it provides that subsidies be granted to low-income people. (The Solidarity and Income Redistribution Funds - FSRI were created). Law 142/94 specifies these functions, establishing a clear order and institutional framework.

Within this context, The Ministry of Economic Development - General Water and Basic Sanitation Authority is in charge of planning and establishing sector policies, the Water and Basic Sanitation Commission is in charge of regulating the sector and the SSPD is responsible for inspection, surveillance and control. In addition, law 142/94 forces the municipality to guarantee user participation in the surveillance of service provision, through the social development and control committees. Chart No. 1 shows the interrelation between the different participants involved in service provision.



Sector's Evolution after the Issue of Law 142 of 1994 ¹

The balance of the water and sewage sector's performance under the model of Law 142 of 1994 is quite satisfactory. Coverage has increased and service quality has improved, operating efficiency has also improved, losses have diminished and commercial management is considerably more efficient. Undoubtedly, the sector's institutional transformation has contributed to this, as well as the participation of private capital, whose contribution to sector investment has made it possible to release public funds.



Central Government Investments

The Central Government's investment in the sector as a percentage of GDP has not exceeded 0.1% during the past few years. The following Figure shows the evolution of investment in the water and sewage sector, as a percentage of GDP.

This situation shows that the State's investment capacity has diminished, making it necessary to look for alternatives to solve the problem. However, the State must continue investing in the sector because public-private joint participation cannot be sustained without the Central Government's financial support.

The macroeconomic context has not helped the sector. The Central Government's fiscal deficit over the past few years has progressively increased. In addition, the municipalities' small institutional, financial and technical capacities to assume the decentralization process, has taken them to cover their high debt levels with resources transferred from Law 60 of 1993 (currently Law 715 of 2001), thereby diverting local funds available from their original purpose, worsening the water and sewage sector's situation.

As we can see in the following chart, funds transferred from the country's current income to the municipalities account for 48% of total investments made in the sector.

Considering that the statistics of the Territorial Development Board of the DNP record that the municipalities have historically used up approximately 70% of their budget, we may conclude that an important portion of investments has been lost due to problems of inefficient implementation.

1/ Source:
«Balance Sectorial» (Sectorial Balance), Comisión Intersectorial de Servicios Públicos, 2001.

Investments in the Sector by Sources of Funds (US dollars)

Year	Law 60		Other							Total
	Mandatory	Free	Own	Credit	Co-Finan	Donat.	Locat.	Depts	Other	
1996	98,756	7,382	286,388	84,865	101,819	64,853	1,541	25,019	27,856	898,479
1997	11,155	8,099	297,703	108,044	149,097	57,312	785	28,044	30,947	1,016,473
1998	437,252	12,261	40,483	37,297	71,546	37,045	1,309	4,129	25,360	565,126
1999	7,657	1,719	238,395	24,987	19,106	27,505	0	6,742	19,446	551,630
Total	1,414,820	29,460	862,969	255,193	341,569	186,716	3,634	63,933	103,608	3,031,708

Indicators

Following are some of the indicators that show the progress made in the sector after the implementation of law 142/94:

Coverage

It is useful to examine the achievements in the sector by analyzing what has occurred with coverage and service quality, which is what users are really concerned about.

Between 1990 and 1997, coverage of drinking water supply nationwide has increased by 6.9 percentage points, from 86.5% to 93.5% of

potential connections. There is no recent information available about water supply coverage in rural areas, but it is believed to be worst off.

Coverage of sewerage systems is a little better. In urban areas national coverage increased from 72.1% to 80.3% between 1990 and 1997, representing an increase of 8.2 points.

As we can see, sewerage coverage was 13.2 percentage points behind water supply coverage in 1997; this difference had reduced 1.3 percentage points in 2000. We can also see that coverage on average is greater in the more populated municipalities.

Recent Evolution of Urban Coverage of Water and Sewerage Services

Group	1990		1997		1999		2000	
	Water	Sew	Water	Sew	Water	Sew	Water	Sew
4 Large Cities	94.0%	86.9%	95.5%	89.1%	97.2%	92.4%	98.2%	93.4%
Cities with over 100,000 inhabitants	80.0%	74.8%	94.2%	77.7%	96.1%	84.2%	96.4%	85.5%
Rest of Municipalities	83.2%	51.4%	91.0%	71.3%	90.0%	67.9%	91.3%	71.1%
Weighted Urban Zone	86.5%	72.1%	93.5%	80.3%	94.6%	81.8%	95.4%	83.5%

Service Continuity

If we use water supply continuity as indicator, the quality of the water service furnished also shows substantial improvement, according to data provided by the Domestic Public Services Commission¹, compared with the results of the study conducted by the DNP.²

Service continuity for intermediate cities grew from 19 hours per day in 1990 to over 23.6 hours per day in 1996. According to the SSPD, continuity of service is generally 100%. Middle-sized and smaller municipalities do not show significant improvement.

The principal cities are Bogotá, Medellín, Cali and Barranquilla; intermediate cities are those

with more than 70,000 inhabitants; middle-sized municipalities are those with more than 12,500 inhabitants and fewer than 70,000 inhabitants; and small municipalities are those with fewer than 12,500 inhabitants.

Continuity of Water Service by Type of City
(Average hours of service per day/24 hours)

Group of cities	1990	1996
Principal cities	100.0%	100.0%
Intermediate cities	79.1%	94.0%
Middle-sized municipalities	72.0%	72.0%
Small municipalities	71.0%	72.0%

Source: DNP(1992), SSPD (1998)

Average Bill

By average bill we understand the value that

results from dividing the total amount billed to the different strata and uses by the total number of users.

Water and Sewerage Bill per Groups of Urban Companies
(Average bill per use in pesos of 2000)

Group of cities	1990	1995	1996	1997	1998	1999	2000	2001
Principal cities	24,635	25,568	29,167	33,580	37,048	39,219	43,494	46,567
Intermediate cities	16,055	16,070	18,359	19,979	20,028	23,504	23,452	23,615
Middle-sized municipalities	8,110	13,166	13,159	13,081	14,164	14,350	14,749	15,112
Small-sized municipalities	3,100	3,443	3,581	3,721	3,877	3,857	3,867	3,886

Source: PGR of 1998. 1999-2001 data correspond to company projections

As we can see, important adjustments have been made to the rates applied in the principal and intermediate cities to reach the reference cost or target rate, whereas in middle-sized and small

municipalities, rate adjustment is much smaller. Bills continue being very low and therefore the required investments to increase coverage and improve services cannot be made.

1/ See: SSPD. Supercifras N° 2, Año2. Bogotá, December 1998. Page 23.

2/Avendaño R.D., Piraquive G., Vásquez B. «Evaluación del desempeño de las entidades del sector de agua potable y saneamiento básico en Colombia». Planeación & Desarrollo. Volumen XXV, N° 1, January-April 1994, page 205, Table 2.

Index of Water Not Accounted For

Index of Water Not Accounted For per Type of Municipality
(Water Billed / Water Produced)

Group of cities	1990	1996	1997	1998	1999	2000
Principal cities	41.3%	40.5%	39.0%	37.0%	34.5%	35.1%
Intermediate cities	42.7%	42.0%	44.7%	42.4%	41.0%	43.8%
Middle-sized municipalities	53.0%	52.1%	44.0%	43.2%	43.2%	43.2%
Small municipalities	51.0%	52.7%	45.6%	44.8%	44.8%	44.8%

Source PGR of 1998, data after 1998 corresponds to company projections

The values of the Index of Water Not Accounted For (IANC - Spanish acronym) of the principal cities fell slightly between 1990 and 1998, the values for intermediate cities remained constant, and those of middle-sized and small municipalities showed a slight reduction. However, there are no associated investment plans reported to achieve that goal. It may be stated that, in general, the IANC has not fallen, and that supplying companies tend to show a constant trend in IANC over the past five-year period.

In some cases, this is due to the fact that the excess installed drinking-water production capacity of the water companies make the cost-benefit analysis to result in a little aggressive policy to control water losses. In other cases, a large proportion of commercial losses, and finally a combination of commercial losses and volume losses, are due to the fact that during many years, investments in maintenance and replacement of systems were not made.

Collection Index

Collection Index of Water and Sewerage Service per Type of City
(Income received/ income billed)

Group of cities	1990	1997	1998	1999	2000	2001
Principal cities	58.7%	64.7%	88.3%	89.0%	89.5%	90.3%
Intermediate cities	56.7%	69.2%	81.0%	84.1%	86.6%	87.7%
Middle-sized municipality	45.0%	39.7%	50.5%	74.0%	75.0%	72.8%
Small-sized municipality	49.0%	47.8%	53.4%	55.9%	58.0%	59.4%

Source: PGR of 1998, data after 1998 are company projections

One of the utilities sector's chronic flaws was the deficient commercial management of a large number of the companies, which was reflected in the low collection of water bills. A significant improvement has been made in this respect in small companies and large cities. For the sector as a whole, the bill collection per-

centage rose from 54.8% to 75.9% between 1990 and 1998. In large cities, it rose from 58.7% to 88.3% between 1990 and 1998. Plans were to reach 90.3% in 2001. The intermediate and middle-sized municipalities are the ones showing least improvement in their commercial management.

Micro measurement Coverage

During the period that has elapsed from the issuing of Law 142 of 1994, significant progress has been made in micromeasurement coverage. This progress is less marked in the middle-sized and

small municipalities, which show smaller efficiency levels in the control of water not accounted for, like in other indicators.

In contrast, the principal and intermediate cities have achieved very high levels.

Water System Micromeasurement Coverage per Type of City
(meters installed / potential meters)

Group de ciudades	1990	1995	1996	1997	1998	1999	2000	2001
Principal cities	91.0%	94.8%	94.6%	93.5%	96.1%	97.3%	98.5%	99.7%
Intermediate cities	77.2%	70.0%	75.2%	77.4%	83.5%	86.7%	95.8%	97.7%
Medium-sized municipalities	28.0%	41.1%	48.8%	51.8%	51.2%	50.7%	49.8%	49.5%
Small municipalities	18.0%	19.4%	19.5%	20.0%	20.5%	20.6%	20.2%	19.8%

Source: PGR of 1998, data after 1998 are company projections.

Entrepreneurial Transformation

Institutional Transformation

	1996		1997		1998	
	Nº	%	Nº	%	Nº	%
Municipio o entidad descentralizada	808	53	411	26	418	24
Empresa de Servicios públicos	240	16	618	38	683	40
Organización Autorizada	479	31	580	36	608	36
Total	1527	100	1609	100	1709	100

Source: SSP

Article 17 of Law 142 of 1994, provides the transformation of public utilities into stock corporations or, exceptionally, into state-owned industrial and commercial companies. In addition, Article 6 authorizes municipalities to exceptionally provide the water services directly subject to certain requirements.

These rules were particularly relevant for water and sewerage services, which in most municipalities were directly furnished by the territorial entity

or decentralized entities with little administrative and budgetary autonomy.

Because of the large number of entities and their different sizes, the institutional transformation process has been slower than in other domestic utilities. But significant progress has been made. By 1996, 16% of the entities providing water, sewerage and sanitation services had been established as a company. By 1998, the percentage had grown to 40%.

Sector Policy

The Drinking Water and Basic Sanitation Authority is in charge of defining the sector's policy, providing technical assistance and training, and furnishing territorial entities and water companies with technical and financial support. The Water and Basic Sanitation Policy Document was drawn up, which defines the principal points to follow to achieve sustainable development. The purpose was to guarantee the objectives of the Drinking Water and Basic Sanitation Sector Plan.

One of the sector's objectives is creating the institutional, regulatory and control conditions to make it possible to organize the actions of local entities, modernize water companies and attain management efficiency. Within this framework and by using the strategy of technical assistance, progress is being made in the entrepreneurial modernization program. The program seeks to improve sector company managerial skills and promote the involvement of the private sector in the provision of water and sanitation services.

The Entrepreneurial Modernization Program -PME started operating in 1999 with World Bank support. It has focused on two components:

1. A technical and financial assistance program to promote and develop processes with private sector participation [PSP] in the provision of water and sewerage services, aimed at improving the management and operation of middle-sized public utility companies that serve populations of between 100,000 and 500,000 inhabitants.
2. A technical and financial program to promote and establish PSP systems to manage and operate regional systems, thereby improving utility services in middle-sized and small municipalities.

The first projects in which the private sector participated in Colombia started in the early '90s,

as a response to the unsustainable crisis in the municipally run public companies, mainly in the cities of the Atlantic Coast (Cartagena, Barranquilla, Santa Marta).

In the second half of the 1990s, under the coordination of the PME, a second generation of PSP projects was started up, following a more orderly, realistic, sustainable project strategy (Montería, Riohacha, Maicao, Cumaral, Buenaventura, Soledad and other). Under this strategy, the Government finances the creation of PSP projects and contributes to the funding of priority investments that fulfill the following four requirements:

- Competitive processes to select specialized operators
- A financial effort made by the territorial entities, which should commit themselves to contribute funds from the General Participation System (Law 715 of 2001)
- A socially sustainable tariff effort by users, in accordance with their payment capacity
- An optimum investment plan of minimum cost.

Public-private joint ventures and some results

As we have already mentioned, the participation of private capitals has increased over the past few years. This process has faced difficulties because of political and labor union resistance, the lack of adequate information about the status of the systems, and deficiencies in the regulatory framework.

Over the past few years, the Ministry of Economic Development has promoted a strategy to develop projects to promote private sector participation. This strategy consists of supporting the municipalities interested in having water and sewerage services provided to them under a concession system or under operation and maintenance contracts.

It is worth noting that upon developing this policy, specific tariff systems have been determined for each concession based on the provisions in paragraph 1 of article 87 of Law 142 of 1994.

In this case the tariffs agreed upon with the operator result from the bidding and concession con-

tracting process, rather than from the regulating of cost of the service.

On the other hand, it is worth pointing out that in these cases the financial capacity is strictly guaranteed, and public resources must be committed to cover subsidies to be given to users of categories 1, 2 and eventually 3.

Private Participation in Water and Sewerage Services with Central Government Support

PROYECTOS PRIMERA GENERACION		APORTES			CON A/C			CON A/C			A/C		
PROYECTO	Población beneficiada (hab.)	Recibo	Subsidio	Desembolso	Recibo	Subsidio	Desembolso	Recibo	Subsidio	Desembolso	Recibo	Subsidio	Desembolso
1 BARRANQUILLA 1,275,000 hab. Gestión y Operación 20 años. Concesión Emp. A. S. S. P. S. S. P.	\$34.0	\$5.0	\$20.0	\$3.0	89%	94%	94%	74%	78%	78%	46%	42%	30%
2 CARTAGENA 880,000 hab. Gestión y Operación 20 años. Aguas de Cartagena S.A. E. S. P. C. S. P.	\$120.4	\$23.0	\$8.4	\$98.0	67%	94%	94%	56%	74%	74%	65%	42%	30%
3 SANTA MARTA 400,000 hab. Gestión y Operación 20 años. Metropolitano S.A. E. S. P. S. S. P.	\$4.7	\$1.3	\$1.8	\$1.6	76%	85%	82%	59%	70%	82%	66%	48%	30%
4 TUNJA 1,115,000 hab. Concesión 30 años. Sewerage S.A. E. S. P. C. S. P.	\$12.3	\$3.1	\$5.1	\$4.1	89%	98%	98%	87%	89%	90%	53%	43%	30%
5 MARIBOLLO 24,000 hab. Operación 15 años. Corporación S.A. E. S. P. C. S. P.	\$1.8	\$0.3	\$1.3	\$0.3	94%	99%	99%	85%	90%	90%	46%	35%	30%
Total		\$182.2	\$32.7	\$42.8	\$107.0	Población: 2,874,000 hab.							

Ministerio de desarrollo económico

Dirección general de agua potable y saneamiento básico

Proyectos con participación del sector privado - PSP

Segunda Generación

PROYECTO	Población	Esquema de PSP	Operador	Fecha Inicio Operación	Costo inversión (US mil)
CIUDADES INTERMEDIAS					
1 Montería (Córdoba)	320.000	Concesión a 20 años	PCO de España / Procton E.S.P.	Enero de 2000	\$70
2 Rionegro (Quindío)	90.000	Contrato de gestión y operación 20 años	Aguas de La Guaya	Noviembre de 2000	\$36
3 Maicao (Guayana)	100.000	Concesión a 30 años	Aguas de La Piedad S.A. E.S.P.	Abril de 2001	\$51
4 Buenaventura (Valle del Cauca)	350.000	Contrato de gestión y operación a 20 años	Comerio Halcón Salud Contrata - Interoceánico	Enero de 2002	\$62
5 Soledad (Atlántico)	360.000	Concesión a 20 años	Sociedad Trópico A	Enero de 2002	\$43
	1.220.000				\$243
PEQUEÑAS Y MEDIANAS EMPRESAS - PYMES DEL AGUA					
6 Puerto Carrizo (Vichada)	7.500	Contrato de Gestión y operación Ejecución del plan de obras	SEPPCA S.A. E.S.P.	Enero de 2002	\$0.20
7 San Juan Nepomuceno (Bolívar)	26.000	Contrato de Gestión y operación Ejecución del plan de obras	Consorcio Estudios Técnicos S.A. - Andescon Ltda	Diciembre de 2001	\$0.00
8 Itzminga (Chocó)	13.500	Contrato de gestión y operación a 12 años con ejecución del Plan de Obras	Francisco Velásquez Ingeniería Civil y Sanitaria S.A. E.S.P.	Octubre de 2001	\$1.70
9 Tadó (Chocó)	8.100	Contrato de gestión y operación a 12 años con ejecución del Plan de Obras	Francisco Velásquez Ingeniería Civil y Sanitaria S.A. E.S.P.	Octubre 2001	\$0.60
10 Quixá (Cauca)	14.000	Contrato de gestión y operación con ejecución del Plan de Obras	Unión Temporal Mirygan - José Sebastián Guerrero Fonseca	Enero de 2002	\$1.00
11 El Charco (Risaralda)	5.000	Contrato de gestión y operación con ejecución del Plan de Obras	Unión Temporal Mirygan - José Sebastián Guerrero Fonseca	Enero de 2002	\$1.80
	75.400				\$10.10
CONSTRUCTOR-OPERACIÓN					
12 Níliga (Huila)	1.800	Construcción Operación	Consorcio Almacena	Abril de 2001	\$2.80
13 Gumana (Meta)	8.200	Construcción Operación	Consorcio Aguas del Llano	Enero de 2002	\$1.50
	10.000				\$4.30
Total	1,308,400				US\$(MM) \$277.00

Thus, the Central Government started an organized strategy to develop joint public-private participation in several municipalities in the country. Montería, Marinilla and Tunja show that it has been a good long-term solution to solve the problems that existed in water and sewage service provision.

The Cartagena Case

The decision to wind up municipal utility companies was taken as a result of the critical situation that existed in the provision of public services. These companies had become a focus of political pressures, high personnel costs, inefficient services, low coverage, and low rates far below the sustainability line, among other.

The Government, through the National Planning Department and Findeter led and obtained the resources to wind up the municipal companies in Cartagena. The local Government, through the Municipal Council, made the decision of ordering their winding up and creating a new mixed economy company (March 5, 1994 agreement), with the participation of public and private capital. After the international tender was carried out to select a partner who would be responsible for the new company’s overall management, the tender was awarded to Sociedad Aguas de Barcelona. The company Aguas de Cartagena S.A., Aguacar, was created. The new operator assumed the responsibility for the water and sewage services of Cartagena in June 1995.

To date the Central Government’s expectations have been fully fulfilled, especially since the funds were assigned for the winding up of the municipal companies of Cartagena.

Aguas de Cartagena S.A. has significantly improved service quality. It has improved indicators and the investment plan with funds obtained from IDB and World Bank credits has been fulfilled.

Indicators	Cartagena	
Year operations started/present	1995	2001
Number of employees	600	287
Employees per 1000 connections	7.1	2.3
Water system coverage	67%	93.6%
Sewage system coverage	56%	74.2%
Users with meters	48%	97.8%
Number of clients	94,639	137,957
Water not accounted for	65%	42.07%
Production capacity (m3/sec)	1.8	3.1
Service continuity	7 hours	24 hours
Time of response to service prob. Water+ Sewage(days)	6	0,73

In addition, the Central Government will contribute US\$23 million in a period of 6 years to implement a water, sewerage and wastewater treatment master plan in the tourist and cultural heritage district of Cartagena, which amounts to US\$129,4 million. Water works to be carried out are the construction of the Juan Gomez Canal, unfolding of Dolores-Albornoz, expansion of the Albornoz reservoir, Albornoz electricity line, sludge treatment ETAP el Bosque (Etapa I), relocation of Amberses water pipes, connection of the Colinas-Alcalis tank, El Pozón and Plan Barrios water system, and missing systems in the southeast area, as well as furnishing tele-controlled systems. Sewage works include: increasing the collector capacity along 23 km, construction of 92 km of primary and secondary systems, renewing 6 pumping stations, building 25 km of Paraiso-Punta Canoas impulsion lines and the construction of 2.85 km of submarine outfalls.

This project will generate 25,000 new direct and indirect jobs.



Conclusions

The entrepreneurial modernization strategy currently developed by the Ministry of Development and the Water and Basic Sanitation Authority is a sustainable strategy aimed at joining public and private resources, consistent with the current public policy for the water and basic sanitation sector.

The hiring of specialized operators in cities like Montería, Cartagena, Barranquilla, Riohacha, Maicao, Buenaventura, Cumaral, Nátaga, among other, has been successful in terms of water and sanitation service quality and coverage.

The joint efforts of all the participants in the sector have shown effective, concrete results in the provision of water and sanitation services to the community. ■



Appendix

Public Policy for the Water and Basic Sanitation Sectors - The Cartagena de Indias case

Introduction

This presentation will deal with public policy in the water and sanitation sector in Colombia, and more specifically in the case of Cartagena de Indias. It is divided into four parts: a presentation of the sector's institutional framework; a description of the public policy for the water and sanitation sector; the specific case of Cartagena; some conclusions.

The Sector's Institutional Framework

Colombia is a unitary republic with 32 departments and 1901 municipalities, and each municipality includes the relevant rural jurisdictions and police offices. Per capita income is US\$4,850. Colombia has 42 million inhabitants, 70% of which live in urban areas, and the country's urban areas continue growing steadily.

The 1991 National Constitution

With the issuing of the Political Constitution of 1991 that establishes clear guidelines in relation to the service delivery, Colombia, marked a milestone in water management. According to the Constitution, efficient services have to be delivered to the population. This opened a space for the participation of the private sector in the management of utilities and further focuses and drives the country's decentralization process. Colombia chose the development model

of delegating to the municipalities many of the responsibilities that were previously managed at a central level.

The Constitution also establishes that the Central State is responsible for regulating, surveying and controlling. It establishes that public services are a State social goal. It authorizes subsidizing lower-income users to meet their basic needs. It establishes free private initiative and economic activity within the limits of common good; and that free economic competition is a right for everyone, which implies a series of responsibilities.

The Constitution also clearly establishes that the responsibility for delivering water and sanitation services -including delivery of drinking water, sewerage and public cleaning services- is the responsibility of the municipalities, in other words of the 1090 municipalities in the country. Likewise, it establishes that the municipalities shall not provide this service through its central apparatus, but through established public service companies or organized communities, and as a last alternative by the municipality, provided that it guarantees autonomous accounting and administrative and financial operation.

The State keeps the role of regulating, surveying and controlling.

The Constitution establishes that rates must reflect efficient costs, economic efficiency, including criteria of solidarity and income redistribution. Solidarity and income redistribution will be analyzed in greater depth further on.

Competition is established as a way of accomplishing efficiency in service provision.



Conditions to check efficiency

Specific articles in the Constitution, like article 336, specify that the government shall transfer or sell monopolistic state-owned companies or permit third parties to develop their activities when state-owned companies are inefficient. The Constitution is very clear about efficient management by service providers.

Article 344 provides that the State shall intervene to rationalize the economy and promote productivity and competitiveness.

Article 210 establishes that private parties may carry out administrative functions in service provision.

From the 1991 National Constitution to Law 142/94

The 1991 Constitution paved the way for the enacting by Congress of Law 142 in 1994, which is what is today known as the Domiciliary Public Service Provision System. This law sets the rules for service provision and management. It has specific chapters related to rates and covers the following services: water, sewerage, collection and disposal of solid waste, electric power, gas, fixed telephones, long distance telephone services, and later extended the service to liquefied gas and oil (GLP).

The 142/94 law sets forth, as one of its major objectives, guaranteeing service efficiency and quality by regulating monopolies and promoting competition. It also encourages wide service coverage, it opens opportunities and establishes mechanisms for private participation in service management and separates the roles to be carried out by the different units. It defines the Ministry's roles like funding policies, support, technical assistance, information management; it makes the regulation committee in charge of regulation and the public service commission in charge of surveillance and control.

Among its major objectives, the law also establishes the rationalization of the rating system and efficient subsidy management.

Inter-Institutional Relationships



It is necessary to analyze inter-institutional relationships and the roles of each unit in service provision management. In the 1090 municipalities, the mayor is the person in charge. In this case, the Mayor of Cartagena de Indias, who has a management contract with AGUACAR water company. This company has a commitment with its users, its consumers, of delivering an efficient service. At the same time users have to pay their bills, which result from the rate formulas that the water and sanitation regulating commission has established on the basis of a five-year study. Users have the faculty of organizing themselves in social control and development committees to exert social control. In some cases users are allowed to participate in the meetings of the board of directors without the right to vote. The council is the legislative level, the municipal level has the political control and the council authorizes the mayors to commit future funds, which in the case of Cartagena was fundamental to permit the viability of the project that is now in execution.

The councils also authorize the mayors to create the solidarity and income redistribution funds. In Colombia lower-income users are subsidized and we have crossed-subsidies with higher-income users. If these subsidies do not permit covering subsidized users, there are additional funds that are funds transferred from the central government by virtue of law 715, through which in the

decentralization process, the government transfers funds from the country's current income.

Briefly summarized, the sector's institutional framework works as follows and includes the mayor, who has a contract with management indicators, goals, etc., the consumers and clients who are delivered a service and who commit themselves to pay a rate. The council authorizes the creation of the solidarity funds and users may organize themselves in the development and social control committees. In the central level, the Ministry of Development and the General Water and Sanitation Authority provide the financial support, technical assistance, and training. The Water and Sanitation Regulating Commission, in its capacity as regulator, establishes rate formulas and promotes competition. The Water and Sanitation Commission or Superintendence is in charge of inspection, surveillance and control. Each one of the municipalities in Colombia is organized this way.

Public Policy

Policies: Objectives and Strategies

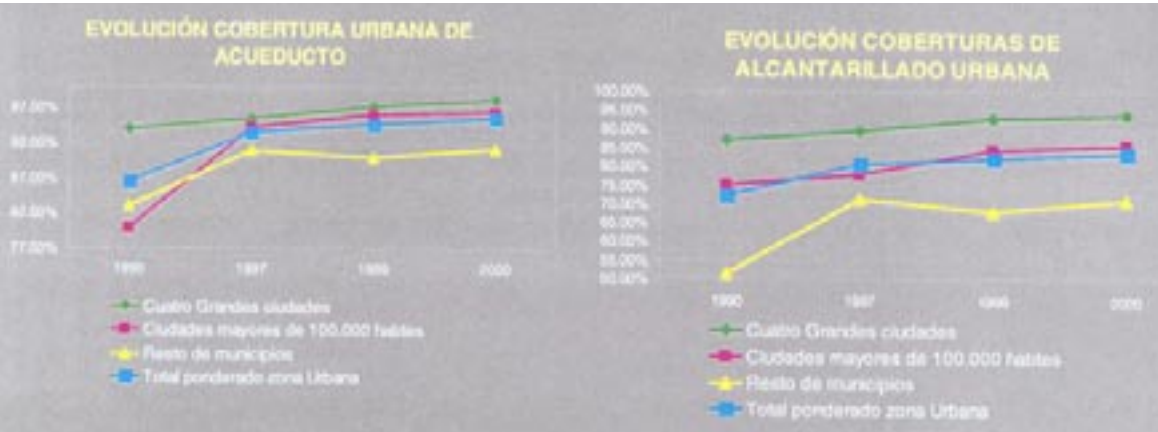
Our policy is established in a document called «Public Policy for the Water and Sanitation Sector», which establishes as one of its principal objectives creating an institutional, regulatory and control framework to permit ordering State entities, modernizing serv-

ice providers, and achieving efficient management. This is the ultimate goal, because in the extent that companies are efficient, they will be able to generate their own funds to carry out the investments required to expand coverage, etc. These objectives go hand in hand with the relevant strategies, and I will just mention two, the Programa de Modernization Empresarial, or Company Modernization Programme & the Politica Apoyo Financiero, or Financial Support Policy: one is the strengthening of technical assistance programs by the Ministry and the second one, its flag program, is the entrepreneurial modernization program, meaning the modernization of the service provision companies. Along with the modernization program there exists a complete financial support program made up of non-reimbursable funds to subsidize investment. Investment is subsidized insofar that users contribute their part via rates, the municipalities contribute their part via central government transferred funds, and then the State complements those efforts. This policy has enabled to expand coverage.

Figures and Evolutions

Evolution of the city coverage for water & sewerage

This table, which presents the 4 largest cities in Colombia -cities with over 100,000 inhabitants- the rest of the municipalities, and the weighted

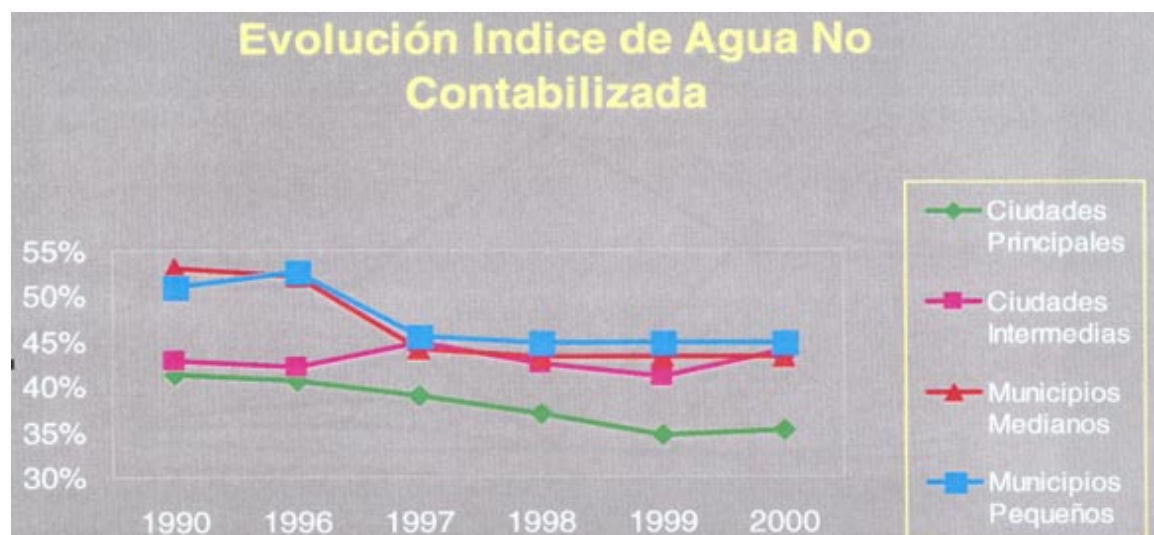


total for the urban area, clearly shows we have reached more Colombians with water supply and sewerage coverage.

Unaccounted for water

Company efficiency is supported and demanded. Companies are required to reduce their indices of water losses or water not accounted for. In the early '90s water losses were 50-54%. No company can be profitable with that level of losses. Losses have been reduced to 35% in the big cities, there are some that have reached 30%. The regulations permit including losses of about 30% in the rate

ing formula defined by the Regulation Committee. Although the amount has fallen, through the forced investment, the municipalities contribute a considerable sum of about 60% of the sector's investment. By virtue of a recently enacted law, the mayors are obliged to use the funds in determined items and cannot destine them to other municipality items unless they have reached 95% water supply coverage and 85% sewerage coverage, all subsidies have been covered and no investments are required. This has made it possible to capture about 650 billion pesos per year for the sector. There are other less important sources



formula. Losses over that percentage cannot be included in the rate. The companies have made an enormous effort in this respect and they are giving high priority to this issue.

The water and sanitation sector's financing sources

The sector's financing sources are, first, and most importantly, resources generated via rates, which is what we consider own funds and that have been steadily rising since 1998, when the companies started applying the rate-fix-



of funds but which also add up, like royalties from the oil, precious metals and coal industries. In Colombia there exists a special royalty fund, from which resources to finance the sector can be obtained. All this provides a safe source of funds. However, 80% of the Colombian population is located in income segments 1, 2 and 3, which are the subsidized segments and we have not yet reached a level of financial sufficiency to permit us to cover all subsidies.

The Company Modernization Programme

Objectives

One of the main strategy is the modernization program, and this is where the projects like the one we are supporting in Cartagena fit. In other words, the government is willing to support with non-reimbursable funds provided that there is a visible structural change in the delivery of public services. It is widely known that public services and public service provision companies have big incentives to contract personnel by political influence, who are not always technically qualified, and thereby excessively increase staff size; not charge the relevant rates; facilitate or promote collective bargaining, thereby excessively raising salaries, all of which results in a tremendous pressure on rates. Therefore, we are exclusively supporting companies that show significant structural changes. Multilateral Banking Institutions, the World Bank and the IDB have given us loans to support those companies.

The program's objectives are increasing service coverage and quality by improving productivity and efficiency of utilities; accelerating the convergence of capitals to improve service provision to the poorer segments of the population; guaranteeing the quality of investment and improving service provider's management combining the social objectives with entrepreneurial criteria. We have IDB and BIR funds.

Models

We have worked with different models depending on the market's characteristics: operation contracts with investment, concession contracts for large and middle-sized cities, and specialized medium or small water operators for smaller cities. We are also working with the constructor-operator model. This consists of calling for bids and the company that builds the infrastructure operates it for approximately 10 to 15 years. This system guarantees the quality of investments and ensures the service's sustainability.

General Characteristics of the System

These arrangements intend to get a specialized operator to manage and operate the systems. In Colombia we are not privatizing, we are not selling infrastructure. Contracts are entered into for periods ranging between 10 and 30 years, depending on each case. The municipality transfers the management and operation of the systems for a limited period to a company by means of a public bid, but there is no property transfer. What we are doing with this is promoting competition and ensuring transparency in the selection of the operators. The operator's technical experience and financial standing must be sufficient so as to guarantee fulfillment of obligations. All processes are organized combining investment with service delivery goals. Goals are set on the basis of five indicators, one of which is coverage. We are requesting a minimum coverage of subsidized segments 1, 2 and 3.

Contract Characteristics

Contracts are not awarded on the basis of rates. Rates are fixed, and analyzed to see whether rates are consistent with the user's payment capacity and willingness to pay. We make an analysis of how much we can collect via rates, how much the municipality and the central government can contribute; the financial closing is made in accordance with this and the service goals.

There are also coverage and quality goals. The operator is subject to the supervision and control, and to the application of penalties due to non-fulfillment of goals.



An analysis is also made of risk coverage and risk allocation and there is a clearly defined investment program, that we call POI (Plan de Obras e Inversiones) which the manager defines in a more concrete manner, annually or for a five-year period. Work plans are flexible and the municipality must approve them in accordance with territorial development and ordering plans.

Public Funds Management

A resource management program has been defined. In the extent that there is a basket of funds and that there are contributors and we all make an effort, the management of those funds is carried out through a fiduciary commission. This fund is made up of government resources, municipal resources and we are trying to get the mayors to be authorized to commit future funds of 10 or 15-year contracts. As the government transfers funds annually, those funds can be used to guarantee that resources go to the fiduciary commission, and the latter may leverage investment funds via loans. There is a fiduciary commission whose existence depends on the contribution of government funds. The operator is the leading protagonist of the project’s administration.

Evolution of the PSP processes in the water sector

From the early ‘90s until 1997 Colombia passed through 3 stages regarding relationships with operators. Cartagena is in a system that was created around 1994. It was the first experience of what we have called first-generation projects; the first projects involving the private sector. It is actually a public-private joint venture, because this project is feasible depending on municipality cooperation. These joint ventures were created as a result of unsustainable situations in publicly operated municipal companies. Certain situations had demonstrated that the State was not capable of delivering the service.

In the late ‘90s, concretely from 1998 to date we have the second-generation projects on which

we have been working for private participation. We work with a segmented market, defined strategies for project development. Each project is developed with an engineering company and an investment bank. Priorities are defined and all the operating systems are developed on the basis of pilot projects that showed that in fact the projects were attractive for investors and operators.

PSP Processes in the Water Sector

Fundings

Inversion USD\$ 459.3 millones

	Primera Generación	Segunda Generación
Beneficiarios	2’674.000	1,306,400
Aporte Nacion : 15.7%	USD\$ 32.7 millones	USD\$ 37 millones
Aporte Local	USD\$ 42.6 millones	USD\$ 105.3 millones
Aporte Operador	USD\$ 107 millones	USD\$ 134.7 millones
Inversion total	USD\$ 182.3 millones	USD\$ 277 millones

In summary, since 1998, 459 million dollars have been invested in the first generation projects, 15.7% of which was contributed by the government, and the rest by the remaining actors. 182 million dollars are contributed by operators via rates to first-generation projects, and 277 million dollars in second-generation projects. This experience has really been important because the system has made it possible to add up efforts and serve a larger number of Colombians.

PROYECTOS PRIMERA GENERACIÓN											
			APORTES			COB. AC.		COB. ALC.		IANC	
PROYECTO		Plan Inversiones (US mill)	Nación	Municipio	Operador	Inicial	Meta	Inicial	Meta	Inicial	Meta
1	BARRANQUILLA (1) 1,200,000 hab Gestión y Operación 30 años/ Saneasa (Dic-98/2000)	\$34.0	\$5.0	\$25.0	\$3.0	55%	94%	74%	75%	40%	30%
2	CARTAGENA (1) 990,000 hab Gestión y Operación 30 años / Aguas de Cartagena S.A. E.S.P. (Mar-98)	\$129.4	\$23.8	\$8.4	\$99.0	67%	94%	56%	74%	65%	30%
3	SANTA MARTA (1) 400,000 hab Gestión y Operación 18 años/ Managua S.A. E.S.P. (Dic-98)	\$4.7	\$1.3	\$1.8	\$1.6						30%
4	TUNJA (1) 110,000 hab Concesión 30 años/ Saneasa S.A. E.S.P. (Dic-98)	\$12.3	\$3.1	\$9.1	\$4.1	55%	94%	67%	92%	53%	30%
5	MANIZALES (1) 24,000 hab Operación 15 años/ Cartagena S.A. E.S.P. (Dic-98)	\$1.8	\$0.3	\$1.3	\$0.3	54%	90%	55%	90%	48%	30%

Among the first generation we have the Barranquilla case. In Cartagena, since 1998, we have invested 129.4 million dollars. We are working with Santa Marta, which was also one of the contracts that were established prior to 1998,

Contunja, which is quite a particular case with small municipalities. This table shows how we make the contributions, the baseline situation and the goals we want to achieve.

PROYECTOS SEGUNDA GENERACIÓN											
		Plan Inversiones (US mill)	APORTES			COB. AC.		COB. ALC.		IACC	
			Nación	Municipio	Operador	Inicial	Meta	Inicial	Meta	Inicial	Meta
1	MONTERIA (Córdoba) 320,000 hab	\$70.0	\$4.0	\$28.0	\$38.0	60%	90%	25%	80%	71%	30%
	Concesión 30 años / Proactiva E.S.P. (Ene-00)										
2	RIOHACHA (Guajira) 90,000 hab	\$36.1	\$4.4	\$7.5	\$24.2	90%	99%	64%	95%	55%	30%
	Gestión y Operación 20 años / Aguas de la Guajira S.A. E.S.P. (Dic-00)										
3	MAICAD (Guajira) 100,000 hab	\$51.3	\$6.8	\$16.5	\$28.0	55%	95%	56%	95%	73%	30%
	Concesión 30 años/ Aguas de la Península S.A. E.S.P. (Abr-01)										

PROYECTOS SEGUNDA GENERACIÓN

		Plan Inventarios (US mil)	AFORTES			COB. AC		COB. RLC		IANC	
			Reserva	Municipios	Operativa	Inicial	Meta	Inicial	Meta	Inicial	Meta
4	BUENAVENTURA (Valle del Cauca) 250.000 hab.	\$62.0	\$15.0	\$19.0	\$28.0	90%	98%	75%	90%	78%	30%
	Gestión y Operación 30 años / Consorcio Hidroedificios - Corfidea - Hidroedificios (Ene-03)										
5	SOLEDAD (Atlántico) 260.000 hab.	\$43.2	\$2.0	\$28.0	\$13.2	74%	82%	65%	80%	60%	30%
	Consorcio 30 años / Soledad Triple A (Ene-03)										
6	PUERTO CARREÑO (Michoacán) 7.500 hab.	\$2.2	\$0.3	\$1.5	\$0.4	93%	100%	2%	36%	57%	20%
	Gestión y Operación 30 años / SEPPDA S.A. E.S.P. (Ene-03)										

PROYECTOS SEGUNDA GENERACIÓN

		Plan Inventarios (US mil)	AFORTES			COB. AC		COB. RLC		IANC	
			Reserva	Municipios	Operativa	Inicial	Meta	Inicial	Meta	Inicial	Meta
7	SAN JUAN NEPOMUCENO (Bolívar) 20.000 hab.	\$3.0	\$0.4	\$2.6		70%	96%	70%	96%	50%	35%
	Gestión y Operación 10 años / Consorcio Estudios Técnicos S.A. - Andacón Ltda. (Dic-01)										
8	ITSMINA (Chico) 13.500 hab.	\$1.7	\$0.1	\$0.1	\$1.5	34%	96%	17%	85%	21%	30%
	Gestión y Operación 12 años / F. Vélezquez Ing. Civil y Sanitaria S.A. E.S.P. (Oct-01)										
8	TADO (Chico) 6.100 hab.	\$0.6	\$0.1	\$0.0	\$0.4	47%	96%	50%	85%	70%	25%
	Gestión y Operación 12 años / F. Vélezquez Ing. Civil y Sanitaria S.A. E.S.P. (Oct-01)										

PROYECTOS SEGUNDA GENERACIÓN											
		Plan Inversiones (S\$ mil)	ASPECTOS			COB. J.C.		COB. M.C.		I.M.C.	
			Radón	Municipio	Operador	Inicial	Meta	Inicial	Meta	Inicial	Meta
10	GUAPI (Cauca) 15.000 hab.	\$1.0	\$0.2	\$0.4	\$0.4	75%	100%	75%	100%	45%	30%
	Gestión y Operación 20 años / Unión Temporal Mayagán - J. S. Guerrero Fonseca (Ene-07)										
11	EL CHARCO (Nariño) 5.300 hab.	\$1.6	\$0.7	\$0.6	\$0.3	75%	100%	75%	100%	45%	30%
	Gestión y Operación 20 años / Unión Temporal Mayagán - J. S. Guerrero Fonseca (Ene-07)										
12	NATAGA (Huila) 1.500 hab.	\$2.8	\$2.2	\$0.6		97%	100%	97%	100%	40%	30%
	Construcción - Operación 10 años / Consorcio Almafina (Abr-01)										
13	CUMARAL (Meta) 9.200 hab.	\$1.5	\$0.7	\$0.5	\$0.3	90%	95%	90%	95%	40%	30%
	Construcción - Operación 10 años / Aguas del Llano (Ene-07)										

In the second generation there are have very important projects like the Montería case, which is a concession operated by the Vivendi group implying investments of 70 million dollars over a 20-year period with contributions also made by the government, the municipality and the operator. In the case of sewerage coverage we expect to increase the current 25% coverage to 80%. Montería is a city of 320,000 inhabitants. It is the capital of a department which had very poor sewerage coverage when the operator started working. The absolute

inefficiency of the managers of the municipal companies had an indicator for water not accounted for of 71%, in other words 71% of water produced was lost. Our goal is to reduce losses to 30%. We have 13 other cases, Buenaventura, for example, is another city of 350,000 inhabitants, Soledad with 360,000 inhabitants, and we also working with smaller municipalities like San Juan Nepomuceno, Ismina, and Tadó. In fact we serve a large variety of municipalities.

The Solidarity Issue - Cross-Subsidies

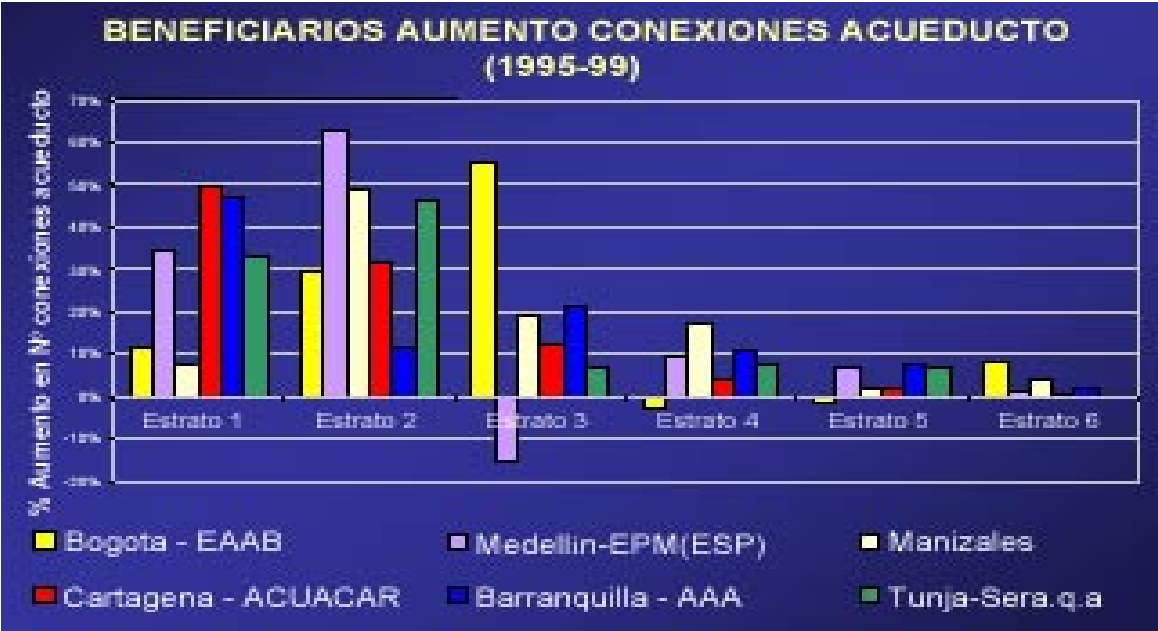
The solidarity issue requires joining all efforts. The law establishes that we must subsidize the three lower-income segments: segments 1, 2 and 3 (domestic users). In segment 1, 50% is subsidized: administra-

tion, operation and maintenance costs; in segment 2, 40% is subsidized, and in segment 3, 15% is subsidized. On the other hand, segment 4 pays the economic cost just like the official sector. Segments N°. 5 and 6 must make a 20% contribution like industrials and businesses.

This is the main source of financing, which are crossed subsidies. Unfortunately, we cannot close with these crossed subsidies because in Colombia, segments 1, 2 and 3 have much more people than segments 5 and 6, which are the paying segments. This clearly shows that private companies are required to invest in segments 1, 2 and 3.

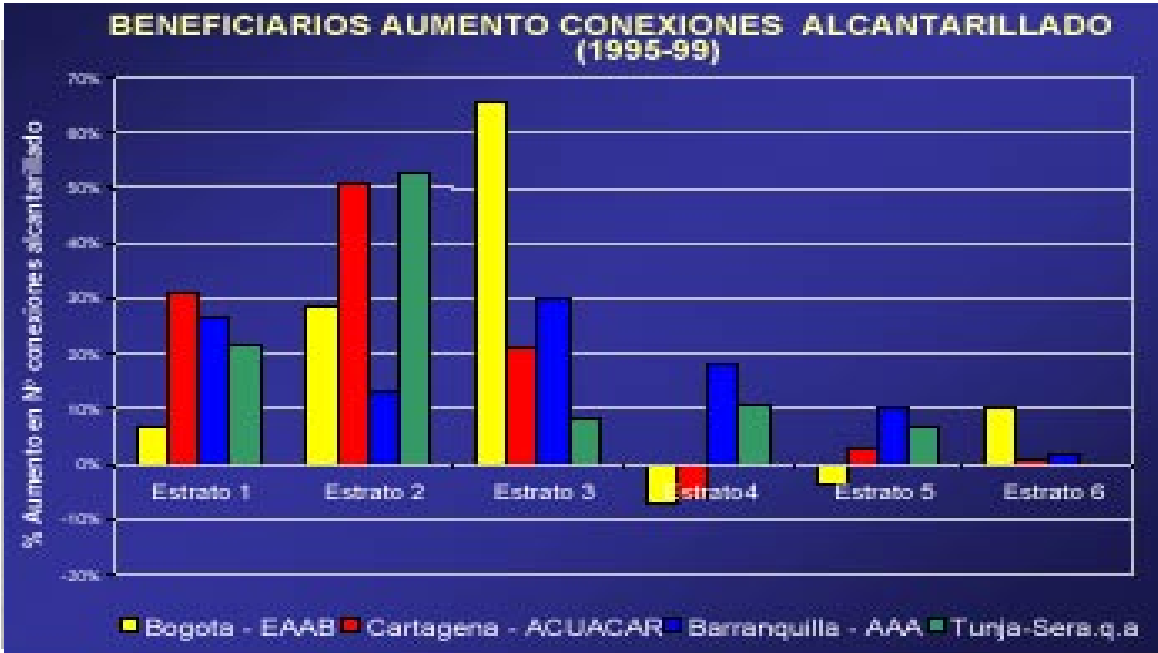


Increase of Water and Sewerage Connections



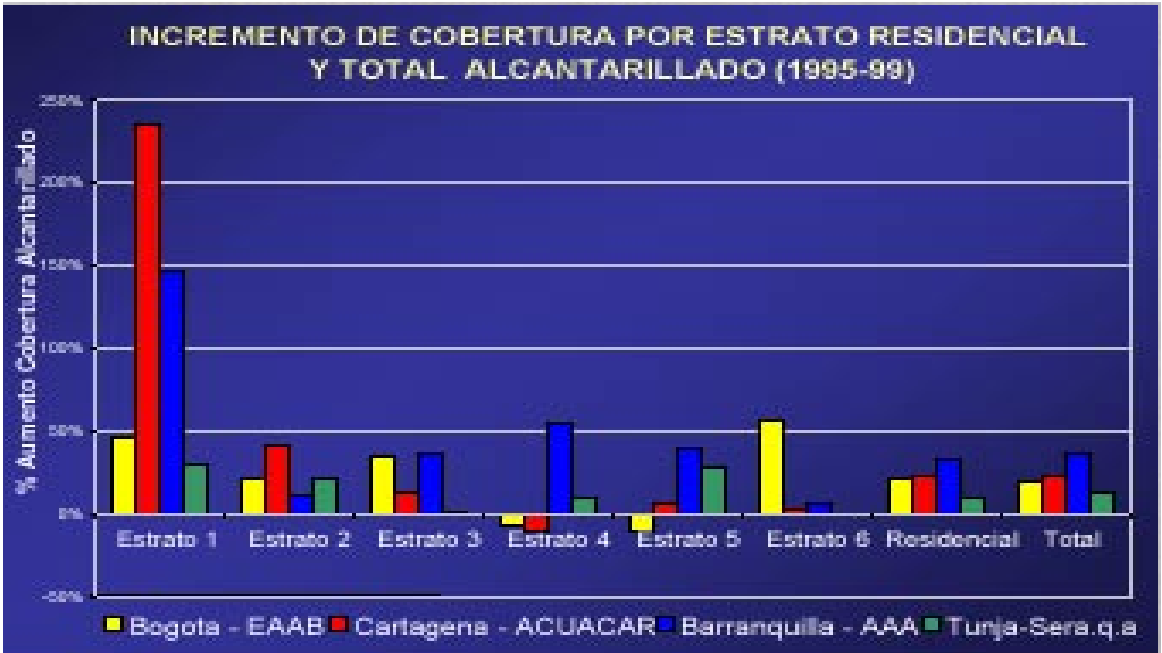
This table shows the total connections made in segment 1, 50% of the total coverage expansion, in segment 2, 30%, in segment 3, 10%, segment 4 and 5, with higher-income users represents a lower number of connections. The same occurs

in the case of Barranquilla. Therefore, the private sector is getting the message that they have to cover the low-income sectors and contribute to fight against poverty. This for water supply.



Regarding sewerage system connections, we have a similar situation for Cartagena and Barranquilla. In Cartagena, 30% of connections corresponded to segment 1 and 50% to segment 2, in other words 80% of connections were concentrated on segments 1 and 2, which are the poorer segments of the population.

These tables shows us the share of AguaCar in Cartagena in segment 1. A significant part of the effort in Cartagena is being focused on the expansion of the sewerage system and wastewater treatment. This has been done in Cartagena because there is a clear policy, financial support, and there has been policy continuity regardless of the changes in government.



The Cartagena Case

n the specific case of Cartagena a significant improvement in service provision can be seen due to the fact that the government supported the project with non-reimbursable funds of 20 million dollars and provided the institutional support and the relevant guarantees so that AguaCar and the municipality could ask the Multilateral Banking system for loans. IDB and World Bank credits are also involved. There is also significant support to environmental licensing, because the project has a big environmental component. The Cartagena municipality also contributed funds from the resources transferred to it by the government. The operating company obtained a BIRF loan, and also supported environmental licensing.

El Conpes 3036 De Mayo De 1999
Garantía Nacional para la operación
de crédito BIRF

El costo del proyecto: US\$117'000.000,00
El Monto del crédito: US\$85'000.000,00
El aporte Local y Nacional: US\$32'000.000,00
(Aporte Nacional No reembolsable por MDE: US\$ 20.0 millones)

El objeto: Plan maestro de acueducto, alcantaril
lado y manejo ambiental
El Plazo: Hasta el 2011
La garantía: De la Nación a través del Distrito

AguaCar also contributed funds and obtained a loan from the IDB. It has efficiently managed the service and it has maximized income from rates, and of course there is excellent project management.

EL CREDITO BANCO MUNDIAL							
Plan financiero general							
(En millones de pesos corrientes)							
AÑO	TASA DE CAMBIO	CREDITO EXTERNO	CONTRAPARTIDA			TOTAL	% de participación
			AGUACAR	DISTRITO	NACION		
1999	1,745.0	10,470.0	872.5	0.0	3,001.6	14,344.3	5.29%
2000	2,050.8	35,478.8	3,076.2	4,470.7	6,700.0	48,725.7	18.34%
2001	2,258.0	82,040.0	2,707.2	9,542.9	10,287.4	94,577.5	31.19%
2002	2,481.0	43,913.7	1,984.8	2,803.5	12,062.5	60,784.6	22.41%
2003	2,703.0	35,139.0	1,081.2	0.0	11,677.0	47,897.2	17.66%
2004	2,871.0	10,048.5	574.2	0.0	3,244.2	13,866.9	5.11%
TOTAL		197,090.0	10,296.1	16,817.1	46,992.3	271,196.1	100.00%
% de participación		72.67%	3.80%	6.20%	17.33%	100.00%	

The project’s financial plan establishes that the government will contribute 46 million pesos or 17.3%, the district 6.20%, AguaCar 3.8% and an external loan about 73%. The benefited population is the whole city of Cartagena. Special emphasis has been placed on the sewerage system and

environmental sanitation of internal water bodies. The objective is to stop discharging wastewater into the bay and into the internal water bodies of the Ciénaga de Tesca.

Some Data

Algunos Indicadores			
INDICADORES		CARTAGENA	
Año inicio operaciones/ actual		1995	2001
Número de Empleados		600	287
Empleados por 1000 Conexiones		7.1	2.3
Cobertura de Acueducto		67%	93.6%
Cobertura de Alcantarillado		56%	74.2%
% de Suscriptores con Medición		48%	97.8%
Número de Clientes		94,639	137,957
Agua No Contabilizada		65%	42.07%
Capacidad de Producción (m3/seg)		1.8	3.1
Continuidad del Servicio		7 horas	24 horas
Tiempo Respuesta Daños Acu+Alc (días)		6	0.73

Indicators show the results of the project's management and the support of the public private partnership with a politically independent operator with a good technical level. The company's staff was reduced from 600 to 287 employees, or from 7.1 to 2.3 employees per connection. Coverage has increased from 67% to 93.6% in water supply and from 56% to 74.2% in sewerage. The increase in the number of users has been considerable, thereby improving the company's financial results. A significant effort has been placed on reducing losses or water not accounted for, which

fell from 65% to 42%. Production capacity rose, and service continuity -Cartagena initially had 7-hour per day service- is 24 hours a day. The delay in answering service complaints has also fallen from 6 days to service within the day.

Follow-ups & Evaluation

Seguimiento y Evaluacion

El Ministerio de Desarrollo Económico adelantará:

- Verificación del cumplimiento de metas físicas
- Verificación del cumplimiento de metas financieras
- Control del manejo de administrativo del proyecto
- Evaluación del cumplimiento del Conpes 3036
- Evaluación del cumplimiento del Conpes 3031
- Evaluación del cumplimiento del Plan de Desarrollo
- Cumplimiento de la programación del proyecto

- Autorización de los desembolsos anuales pactados
- Liquidación del convenio de apoyo financiero

The Ministry of Development had a significant role in this field because it acted as security for the loan granted by the government. We check goal fulfillment, we assess COMPES documents, compliance with project program as we supply the funds. Funds are contributed proportionately by the counter-party and the government.

Conclusions

The government has a clear policy, the Ministry of Economic Development has achieved important advances in the process of streamlining companies. Nevertheless, we have to recognize that this is a complex context. It is not easy taking away company management from politicians. Furthermore, transaction costs continue being high.

The purpose is to continue advancing with realism, using flexible models, with private sector participation in company management, and we will continue having the multilateral banking system's support, both of the IBD and the BIRF.

The results are satisfactory in service provision in the City of Cartagena, and in the other processes that we have mentioned. ■



Aguas de Cartagena, a Model Public and Private Sector Joint Venture to Improve Water and Basic Sanitation Services

Ing. Diego Humberto Caicedo Ortiz

Superintendente General,
Superintendencia de Servicios Publicos Domiciliarios

General Background

- Aguas de Cartagena S.A. E.S.P. is a mixed-ownership company, which was legally established on December 30, 1994, when its corporate bylaws were filed under role number 5427.
- Shareholders are broken down as follows: Distrito Turístico de Cartagena (50%), Sociedad General Aguas de Barcelona S.A. (45.91%), and individuals (4.09%).
- Aguas de Cartagena began operations on June 1, 1995.
- The company maintains good labor relations with its trade union, which was founded in 1996.
- Arthur Andersen is the company's external auditor.
- As of December 2001, the company provided water and sewer services to 121.711 users (708.378 inhabitants) y 99.490 subscribers

Financial and operating plan (PGR)

- In 1996, the Ministry of Economic Development (MDE) approved (via Resolution 106 of 1996) the company's first PGR for the period 1996-2000.
- It approved (via Resolution 143 of 1997) an updated PGR for 1997.
- It approved (via Resolution 1028 of 1998) an updated PGR for 1998.
- The company updated the PGR for 1999.
- The company did not issue updated PGR's for 2000 and 2001 but did so en 2002.

Capital Structure

Corporate bylaws were modified in 1998 (under role number 3.187) in order to increase authorized capital from \$4.000 million pesos a \$15.900 million pesos. As a result, the nominal share price rose from \$10.000 a \$26.500.

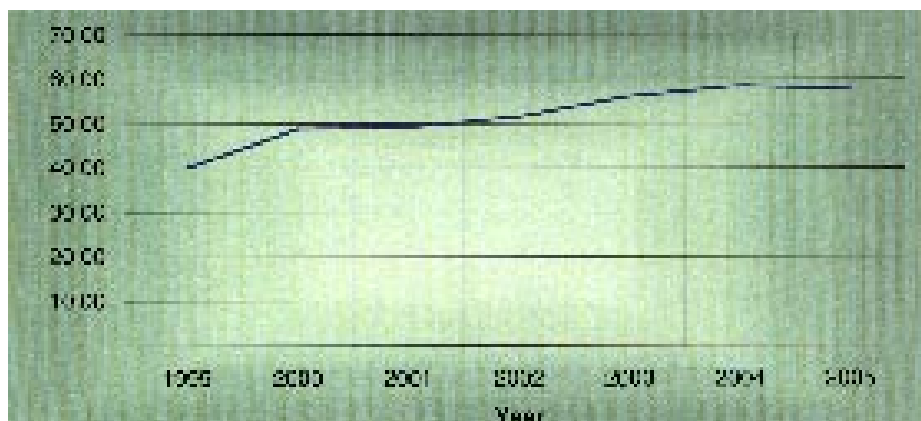
Company situation (D.O.F.A.) methodology

WEAKNESSES	OPPORTUNITIES
Low productivity due to system deficiencies	- Development of Master Plan. - Resources available. - Demand for new services..
STRENGTHS	PROBLEMS
- A dequate privatization model. - Experienced private operating partner. - Use of up-to-date technology - Strong negotiating power. - Corporate committment. - Availibility of resources. - Good human resources (profesional and technical).	- Legal and regulatory reforms. - Lack of water conservation awareness. - Crime / political violence. - Economic situation.

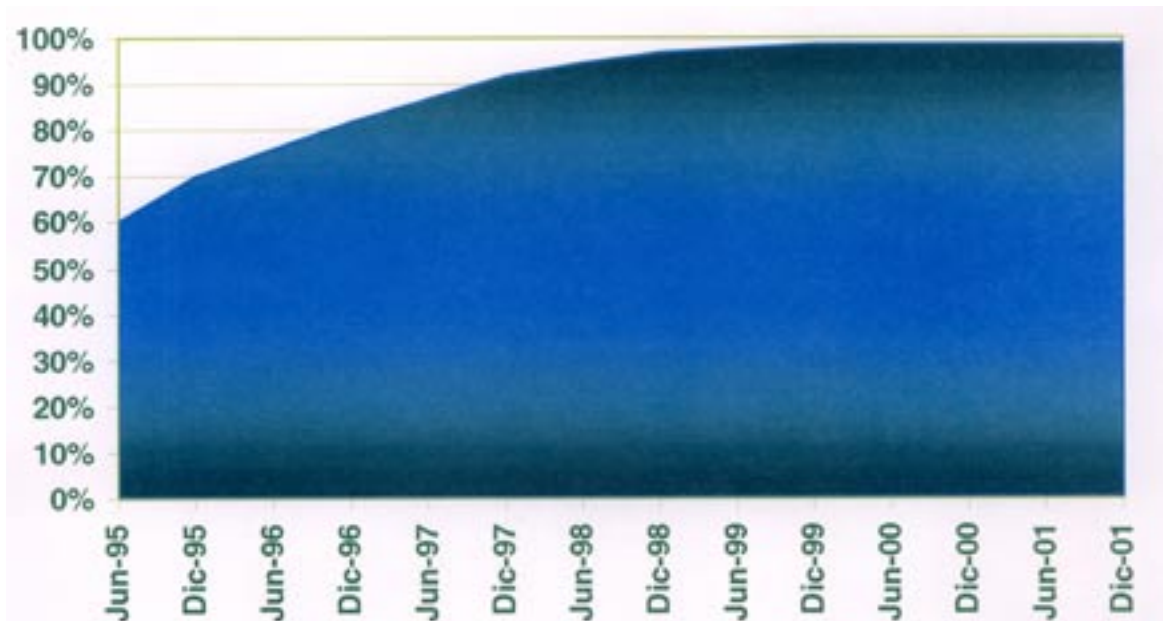
Aguas Cartagena key ratios : Before and after

		1995	2001
Water loss		60%	42.07%
Service uptime		60%	98.82%
Coverage	Water	73.08%	93.61%
	Sewer	60.63%	75.02%
Water quality		Bad	Good

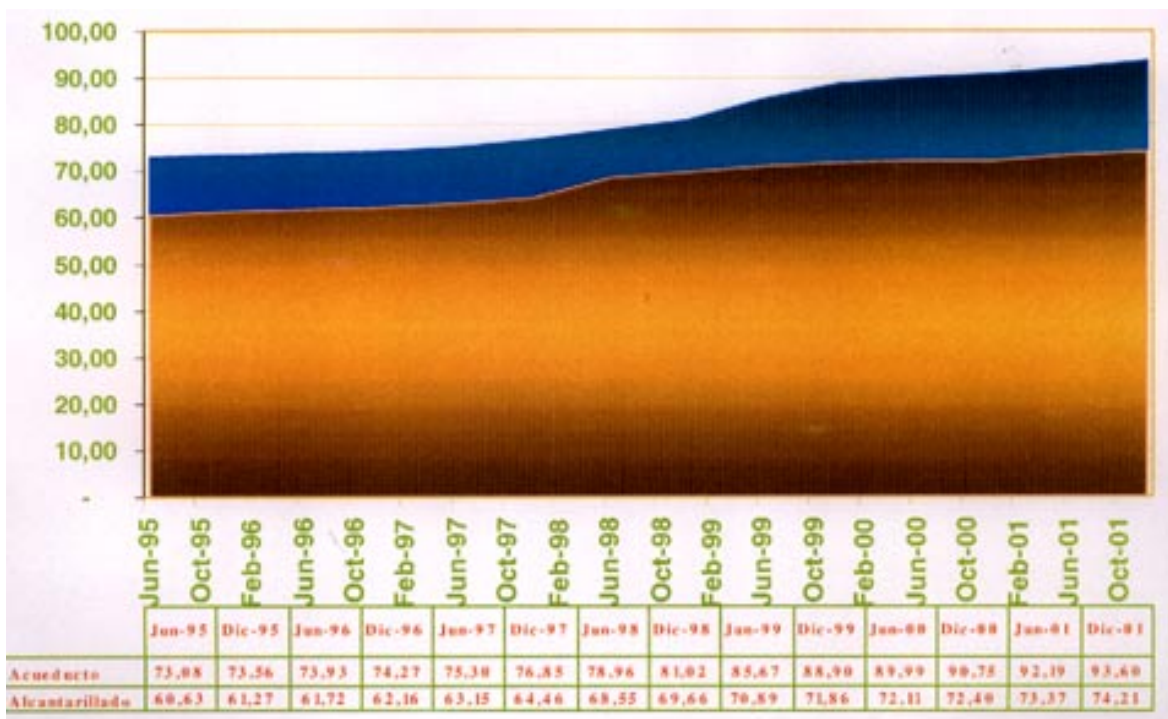
Water productivity (Losses)



Service Uptime



Service Coverage





1998 Annual Report (AEGR)

- Financially sound.
- Emphasis on improving and expanding services.
- Other strong points: increase in billing and collections; improved customer service; creation of Environmental Department; employee training; updated job descriptions and procedures manual, and obtainment of Quality Assurance Certificate, NTC-ISO 9002 (Icontec).
- Net profits rose from \$4.000 million pesos in 1997 to \$4.694 en 1998.
- Debt liabilities increased by 34%.
- Installation of 7.134 new water meters.
- Drinking water storage capacity increased by 47% (from 34 mil to 50 mil M3).
- Replacement of 153 kilometers of water pipes. 6.169 water samples taken, in compliance with Decree 475/98.
- Implemented zoning in four large sectors.
- Assets increased more than liabilities.

1999 Annual Report (AEGR)

- “We did not observe any significant situations that could endanger the financial viability of the company”. AEGR
- Advanced computer systems.
- Investments totaled \$7.206 (109%)
- Net profits of \$3.927 million
- Acid test of 1,35
- Difference of \$5 mil million between contributions and subsidies.

- Completion of plant and network metering system.
- Installation of 13.407 individual meters.
- Installation of 51,5 km of water pipes.
- Revenues of \$54.700 million, compared to, \$46.500 million in 1998
- Billing complaint rate of 1,17% ..

2000 Annual Report (AEGR)

- “We did not observe any significant situations that could endanger the financial viability of the company”. AEGR
- Acid test of 1,07.
- Revenues of \$57.700 million (up from \$54.700 million in 1999).
- Billing complaint rate of 0,72%.

2001 Annual Report (AEGR)

- “We did not observe any significant situations that could endanger the financial viability of the company”. AEGR
- Acid test of 1,00.
- Deficit of \$5.400 million pesos between surcharges and subsidies.
- Profits of \$5.035 million (down \$169 million from 2000).
- No sewage pretreatment.
- Revenues of \$63.000 million (up from \$57.700 million in 2000).
- Billing complaint rate of 0,51%.
- Principal water and sewer investments took place in poor sectors.

Corporate milestones

MILESTONE	DATE ACHIEVED
Company financial viability	January 1997
Legal incorporation	July 1995
Economic cost	July 1996
Separate accounting	January 1998
Standardized accounting	January 1998
Internal controls	Continuous improvements
User census	Continuous updates
System metering	According to work plan in Management and Earnings Plan (PGR)
Financial and Operating Plan	July 1996 and update in 1997
External audits	Starting in 1996

The previous slide, the company has met all the corporate milestones established by the CRA in its Resolution 12 of 1995.

Financial and Operating Ratios
Actual Vs Projected Ratios

Ratio	1998		1999		2000		2001	
	Actual	Projected	Actual	Projected	Actual	Projected	Actual	Projected
Financial								
Revenue efficiency	78,50%	75%	82,70%	78%	87,42%	78%	88,91%	78%
Portfolio turnover	78,48 days	87 days						
Investment execution	93,01%	100%	109%	100%	94,20%	100%	97%	100%
Service quality								
Uptime	97%	85%	98,62%	100%	98,78%	100%	98,82%	100%
Drinking water quality			In general, complies with Decree 475 of 1996					
Metering	94,23%	92%	96,30%	95%	99,10%	95%	97,98%	95%
Coverage								
Water subscriber	78,86%	76%	77%	80%	77,80%	80%	82,57%	82%
Sewer subscriber	67,75%	66%	62%	73%	64,14%	73%	65%	75%
Water user subscriber	87,82%	82%	85,80%	79%	87,08%	89%	93,61%	90%
Sewer user subscriber	75,95%	70%	70%	70%	70,26%	81%	75,02%	82%
Operating & technical								
Water loss	48%	46%	43,90%	43%	41,46%	40%	42,07%	38%
Labor efficiency (\$/M3)	183,64	226,5	223,15	234	213,39	257	227,79	291,7

Financial and Operating Ratios: Actual Versus Projected

As indicated in the previous slide, the Company met most of the projected goals in each period. The indicators for labor efficiency, user metering, and revenue efficiency are particularly noteworthy. As for water user coverage, actual results exceeded projected results in every year except 2000. Meanwhile, although actual investments lagged behind projections in some years, overall the results were positive.

Aguas de Catagena S.A. E.S.P. Financial and Operating Trends

•	• 1998	• 1999	• 2000	• 2001
• Financial Ratios	•	•	•	•
• Revenue efficiency	• 78,50%	• 82,70%	• 87,42%	• 88,91%
• Investment execution rate	• 93,01%	• 109,00%	• 94,20%	• 97,00%
• Service Quality	•	•	•	•
• Uptime	• 97,00%	• 98,62%	• 98,78%	• 98,82%
• Metering	• 94,23%	• 96,30%	• 99,10%	• 97,98%
• Coverage Ratios	•	•	•	•
• Water subscribers	• 78,86%	• 77,00%	• 77,80%	• 82,57%
• Sewer subscribers	• 67,75%	• 62,00%	• 64,14%	• 65,00%
• Water users	• 87,82%	• 85,80%	• 87,08%	• 93,61%
• Sewer users	• 75,95%	• 70,00%	• 70,26%	• 75,02%
• Operating and Technical Ratios	•	•	•	•
• Water loss	• 48,00%	• 43,90%	• 41,46%	• 42,07%
• Labor efficiency (\$ December 2001)	• \$234,83/ M3	• \$261,24/ M3	• \$229,71/ M3	• \$227,79/ M3

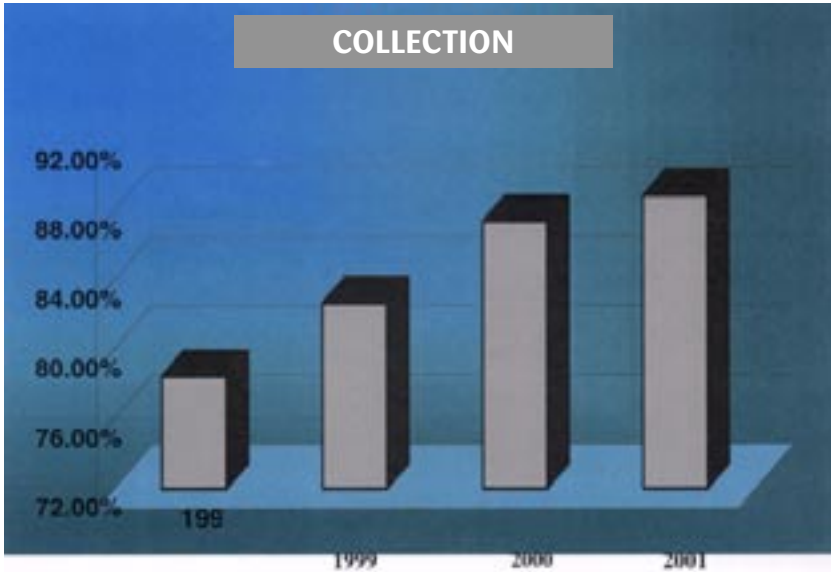
• Source: Indicators reported in AEGR reports.

Financial and operating trends: 1998 - 2001

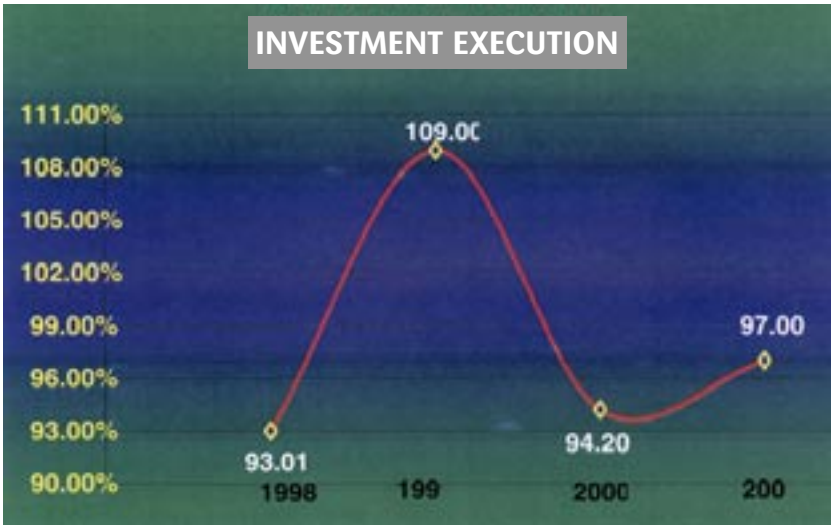
All the financial and operating ratios improved, except for sewer coverage, which remained basically stable during the period.

The following graphs show the trend of the different ratios:

	1998	1999	2000	2001
Eficiencia del Recaudo	78,50%	82,70%	87,42%	88,91%

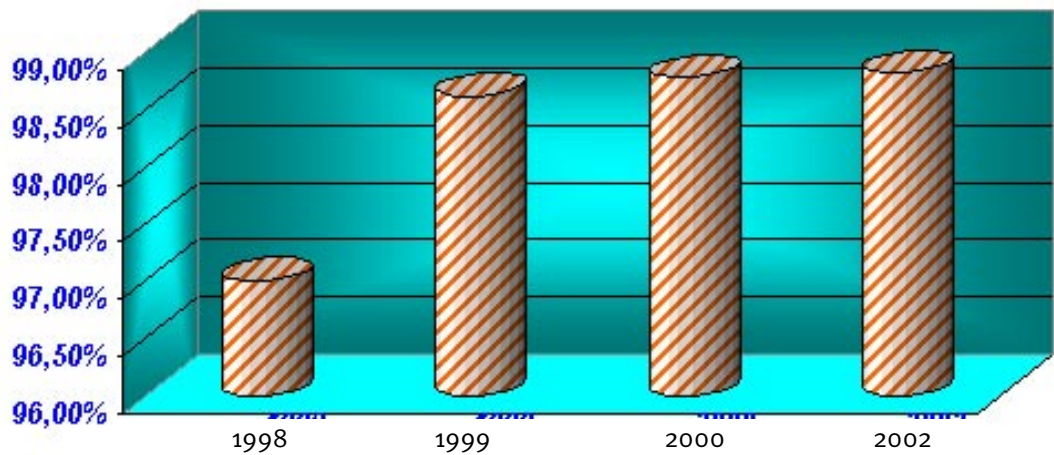


	1998	1999	2000	2001
Ejecución de inversiones	93,01%	109,00%	94,20%	97,00%

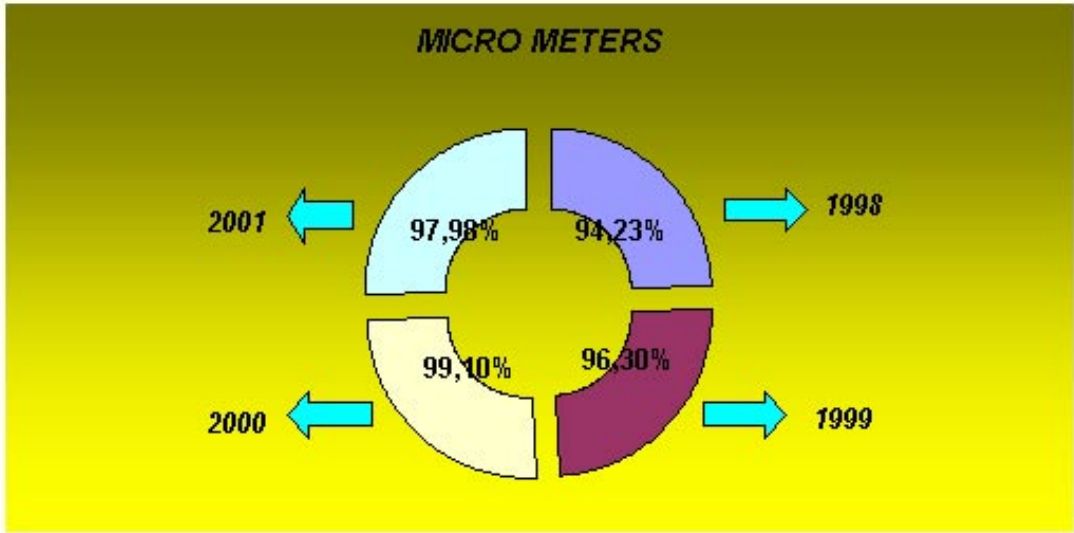


	1998	1999	2000	2001
Continuidad del servicio	97,00%	98,62%	98,78%	98,82%

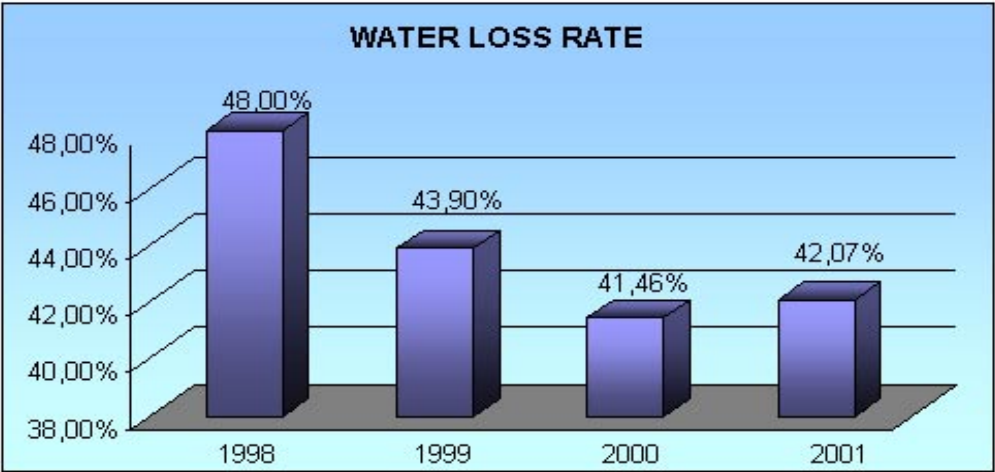
SERVICE UPTIME



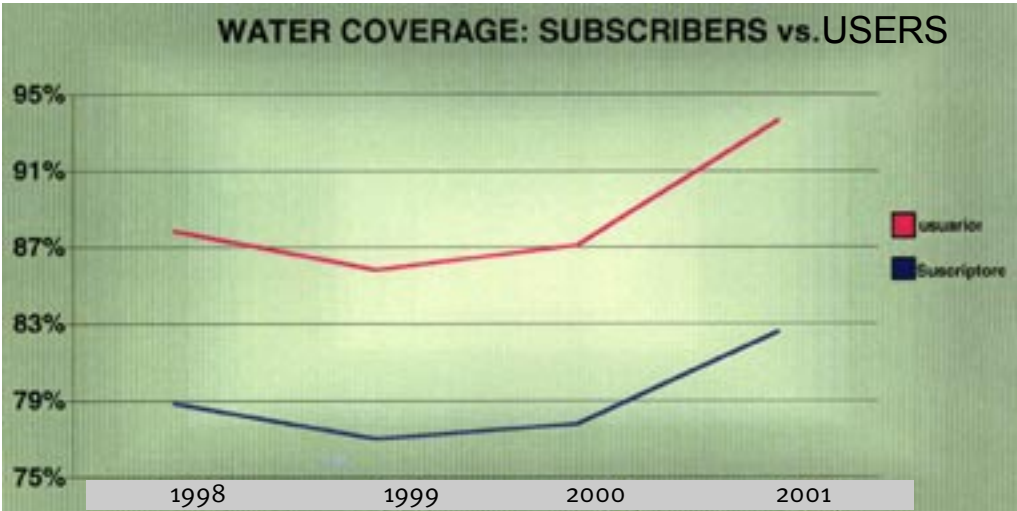
	1998	1999	2000	2001
Micromedición	94,23%	96,30%	99,10%	97,98%



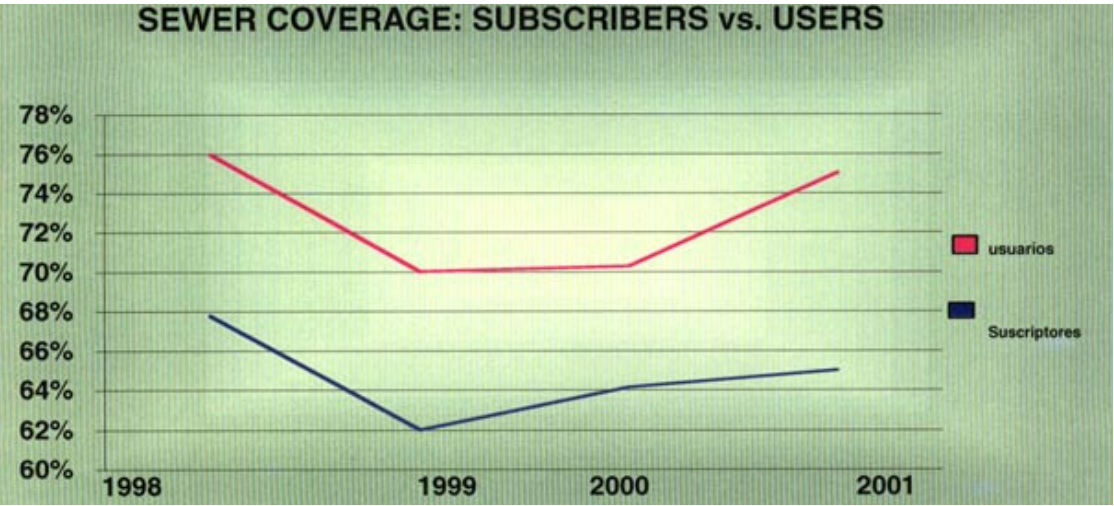
	1998	1999	2000	2001
Indice de Agua no contabilizada	48,00%	43,90%	41,46%	42,07%



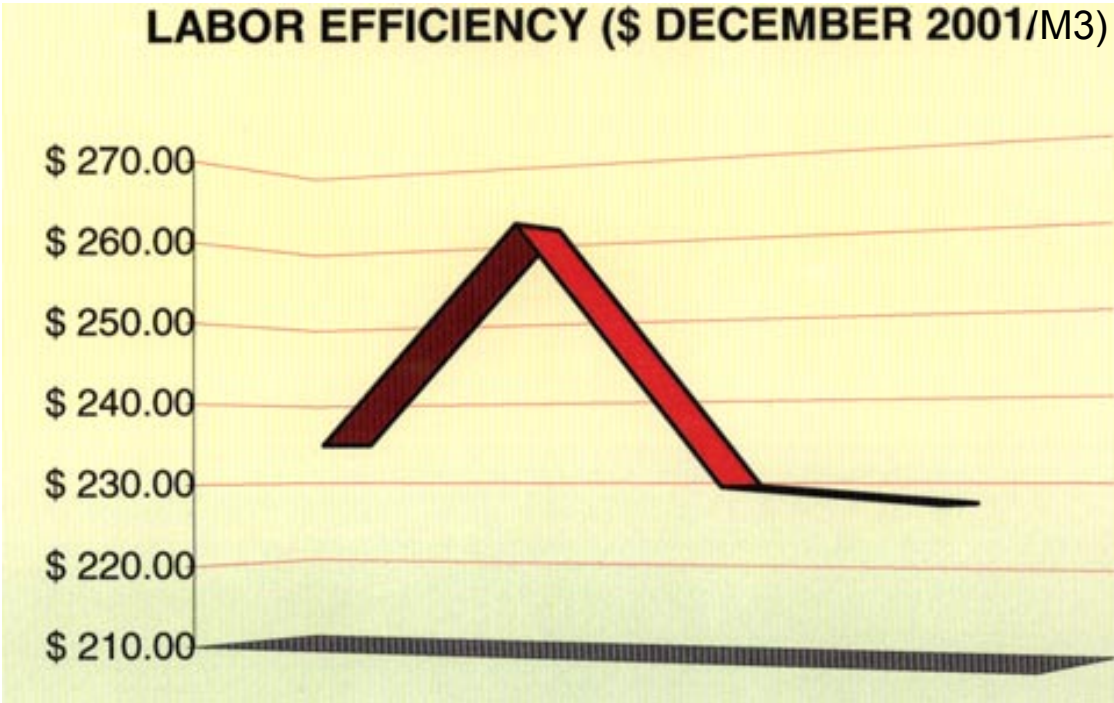
	1998	1999	2000	2001
Cobertura suscriptores acueducto	78,86%	77,00%	77,80%	82,57%
Cobertura de usuarios acueducto	87,82%	85,80%	87,08%	93,61%



	1998	1999	2000	2001
Cobertura de suscriptores alcantar.	67,75%	62,00%	64,14%	65,00%
Cobertura de usuarios alcantarillado	75,95%	70,00%	70,26%	75,02%



	1998	1999	2000	2001
Eficiencia laboral (\$ diciembre 2001)	\$ 234,83	\$ 261,24	\$ 229,71	\$ 227,79



Expansion of services

The expansion of the water and sewer systems is designed to solve the basic unsatisfied needs of the poor and to provide service to new urban developments. As shown in the following slide, the investment execution rate is high:

Accumulated expansion capital invesments

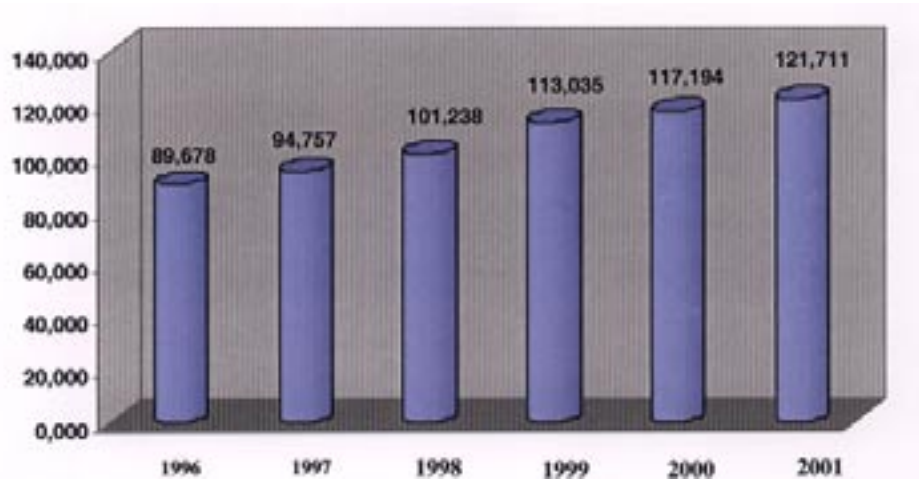
SERVICE	ACTUAL INVESTMENTS	PROJECTED INVESTMENTS	RATIO
	\$ de 2001	\$ de 2001	%
Water	82.827.171.000	72.333.393.000	115%
Sewer	53.362.065.000	57.926.949.000	92%

Source: AEGR Reports

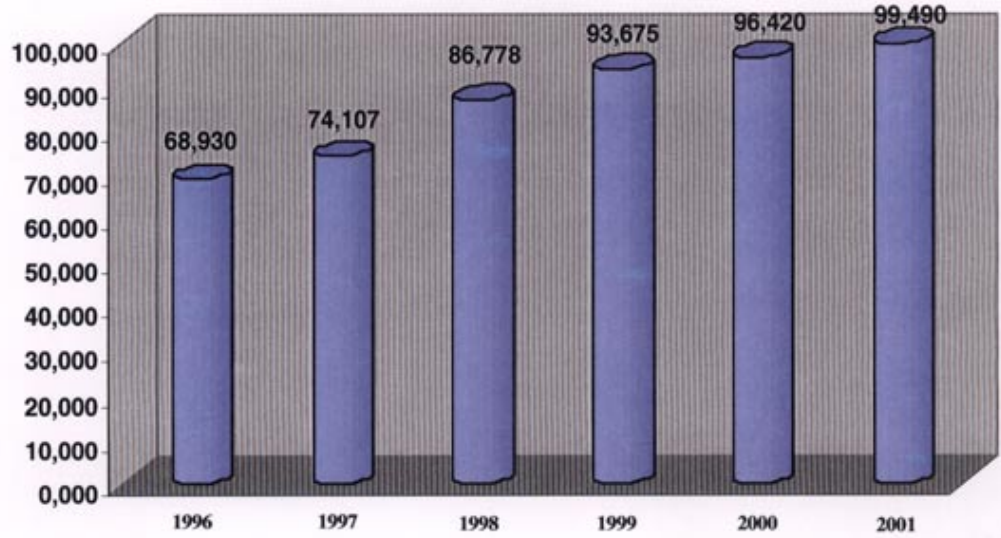
Other Commercial and Financial Ratios

The following graphs illustrate some other ratios that reflect the progress that the Company has made in different areas:

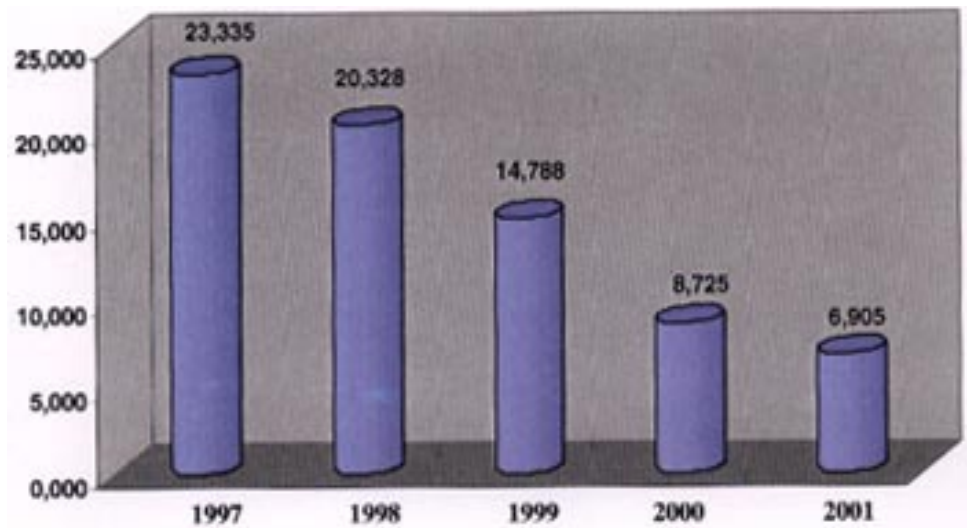
Water Users



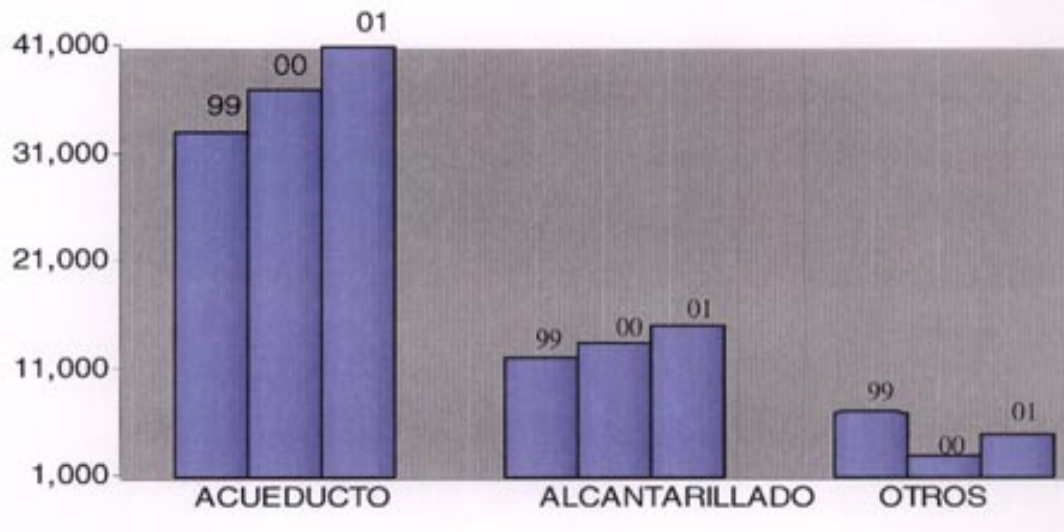
Sewer Users



Complaints



Operating Revenues



Conclusions about water and sewer services

As the new private sector operating partner, Aguas de Barcelona introduced a dynamic, ongoing corporate reorganization process designed to improve and extend the city's water and sewer services for both existing and new users. As a result, financial and operating ratios have improved significantly, and both management and public policy goals have been met on time in accordance with the National Government Water Plan. It should be pointed out that the Company's progress is due to the joint efforts of the two principal partners: Distrito Turístico de Cartagena and Aguas de Barcelona

- Implement the Water, Sewer, and Environmental Master Plan, which will cost about \$250 million dollars over 10 years.
- Increase the level of waste water treatment.
- Reduce the water loss rate to at least 30%.
- Maintain and improve other financial and operating ratios.
- Maintain excellent labor relations with the union.

Aguas de Cartagena Corporate Mission Statement

To strengthen the joint venture between the public and private sectors by achieving management excellence and by improving and expanding water and sewer services to help satisfy basic social needs.

Aguas de Cartagena Corporate Goals

In accordance with the National Government Water Plan, the Company has established the following goals for the year 2025:

- 100% drinking water coverage.
- 95% sewer coverage.
- 24 hours per day system uptime for water users.
- 15-30 meters of water pressure in the water system.

Acuacar's Experience in the Water Services for the City of Cartagena de Indias

Luis A. Pinzon

Environmental Manager, Aguas de Cartagena

Introduction

The assessment of all the cases of private participation presented in this seminar are a valuable experience in the extent that cities and countries may have similar problems, or face the same challenges and restrictions.

Aguas de Cartagena, is an institutional project, which has already been started up. I will emphasize the aspects that can be of common interest both in relation to its creation and management.

The presentation is divided into five points: background information and the private participation process; a brief note about the group operating the water and sewerage services of Cartagena, Agbar; planning and expansion of the service, which perhaps has been the fundamental part for subsequent coverage development; performance and achievements, which have been illustrated with indicators that will permit us to advance rapidly, unless there is one that may be important; and some conclusions about the process and operation.

Background and Private Participation Process



Background Information

Cartagena's current population is 850,000 inhabitants. The city is the most important tourist center in Colombia due to its natural beauty and historical background. In 1984 UNESCO declared Cartagena de Indias a historical heritage of humanity. The city is also an industrial center. In addition to its main industry, the tourist industry, it has an important petrochemical industry, soft-drink industry and seafood industry.

Cartagena is a very dynamic city. Over the past twenty years, the population has doubled, partly because of migration inflows from the center of the country as a result of the armed conflict. Cartagena is viewed as the safest city in Colombia, therefore people consider it as an alternative to search for economic opportunities and a safer life.

Problems of the Federal Public Services Companies

Technical Problems

The water system was operated by the district's public enterprise for over 35 years, a period which was characterized by a series of problems of different kinds shared by most Latin American cities and other cities around the world. First, there was a technical problem because there was a severe deficit of drinking water of about 60,000 m³ per day, water losses were approximately 60% (not measured), there was low quality service, low coverage of water and sewerage services, and a serious problem of contamination of water bodies because of inadequate wastewater management. Wastewater was simply discharged into adjacent water bodies.

Financial Problems

Revenues earned were insufficient to cover the company's minimal expenses and absolutely no investment was made, which prevented improving service quality.

Commercial Problems

There was insufficient amount of information about subscribers and customers, and the subscriber portfolio. There were insufficient meters and inadequate controls, management of delinquent customers was inexistent, nothing was done to recover customer portfolio, and collection was about 40% to 45% of total invoicing.

78 Steps Taken to Create a new Framework to Manage Water and Sewerage Services

First, the decision was made at the local level of creating a new company as a response to the crisis generated in 1994 due to service quality and because of the impossibility of expanding coverage. Therefore, the public district company was wound up and a bid was called to look for a new operating partner, which was the model that had been chosen for Cartagena.

This was possible because of the significant changes occurred in the political constitution and

the new law issued for domiciliary public services, which had to be regulated to set the rules for providing the service. Promoting private participation in water and sewerage services as a result of the constitution and law, a new rate system, and the creation of a regulating commission and superintendence, in charge of issuing rules and rates, in addition to controlling and supervision. This made it possible for bidders to see the opportunity of a stable system in the country.

The technical assistance provided by the World Bank, through a country loan, approved a technical assistance component that made it possible to opt for private participation and prepare the bidding conditions for the new system that would be adopted.

The Three Stages in The Implementation or Contracting of the New Institutional System

It is worth noting that because of the serious problems faced by the municipalities during so many years, they leave very little time to make fundamental decision in public services. I am saying this because after living so many years with problems, sometimes in a very short period - three months- we tried to get private operators interested, and this is something that should be reviewed.

Stage 1 -Political Decisions and Initial Moves

The first stage lasted seven months. Very important decisions were made, both at a district and national level. The National Government tried unsuccessfully to restructure the public company using different solutions. But it could not be re-floated. Therefore, it was decided to wind the company up and to review and select the private sector participation alternative. At this stage, the operating model was selected with the help of a group of consultants. Several options were studied, from privatization to a type B or T concession, and service contracts. In other words, the entire range of options was analyzed and finally after opting for a system, companies were invited to bid. This system was adopted because of the

socioeconomic conditions and because the cost of the infrastructure was too expensive to think of selling the entire infrastructure to an operator.

Stage 2 - Bidding process and Selection

The following stage was the bidding process. Very little time was assigned to this process. It was an international bid, and within a period of four months Aguas de Barcelona was selected as operating partner.

Stage 3 - Contract & Transfer of the Service

The contract was signed and the service transferred. This took longer than necessary because it coincided with a change in the district administration and the new Mayor decided that everything had to be reviewed all over again. This took an additional seven months until completing negotiations and signing the contract. The company started operating in June 1995.

Shareholder Composition

The system chosen was a corporation organized in accordance with private law, a mixed economy company governed by the code of commerce for private companies managed by a group of professionals appointed by a private partner, administered according to private company common practices and dedicated to the presentation of a public service through an infrastructure that does not belong to it.

That is the essence of a mixed company and the fact that capital is made up in variable proportions of the public owner of the infrastructure and the professional private manager with a broad experience, both represented in the partnership's ruling bodies. This definition is extremely long, but it attempts to describe the essential conditions of rendering a public service, the organization and by-laws according to private law, the company's professional management, and a capital made up of partners that fulfill two sine qua non conditions, which are the public partner directly linked to the responsibility of rendering the service, and the private partner, who has the proven professional experience, in such a way that both are duly represented in the council or the board of directors. According to this definition, the company

is made up 50% by a public partner, represented in district shares, 4.09% by the local private sector, and 45.9% by the operating partner Aguas de Barcelona.

Institutional Aspects

The Board of Directors is made up of five members, it is chaired by the Mayor and board decisions are made requiring 80% agreement. Therefore, the public and private sectors have to agree on the company's principal decisions. The district's administration holds the ownership of the service offered and controls the concessionaire's work. This may represent a dual responsibility because, being a partner, it is also an operator, but also, as owner of the infrastructure, it is responsible for managing and following up Aguas de Barcelona's work, it appoints the manager, the managing team and the managers of the operating company. The contract includes performance goals to improve efficiency and service quality, focusing on those points where efficiency really has to be improved and technology transferred to manage and operate the services. At the end of the concession (26 years), the assets are returned to the district in good operating conditions.

The AgBar Group

The company is operated by Aguas de Barcelona (AgBar), which is made up 47% by Caxia and Suez Lyonnaisse, Endesa -the energy company- and stockholders 38.8%.

AgBar is a private company founded in 1967 and has a 135-year experience in overall water management. It is listed in the Spanish stock exchange and rated double AA(-) by Standard and Poors, with a stable outlook.

The company has activities related to the overall water cycle, solid waste disposal, life insurance and technical inspection of vehicles in ten countries including Spain. It has recently established in Brazil in water management in Gaurinova, Matogrosso, and Aguas Saltillo in Mexico. It is also working in La Habana and Varadero in Cuba. It supplies water to a

population of 34 million inhabitants, provides sewerage services to 26 million people, and wastewater treatment to 15 million. It has 982 water supply contracts and 655 sanitation contracts. It operates 200 water treatment plants and 435 wastewater plants.

Planning and Expansion of the Services

Planning and Expansion Strategy

Once the company started operating it focused on planning and service expansion. One of the biggest risks when starting this kind of operation was the technical problems resulting basically from the poor information obtained by the prior operator and consultants. Therefore, forecasted demand, expansion needs, and extension of the existing plans had to be reviewed. A certain degree of flexibility is required when starting an operation, so that the new operator or person responsible for this investment may review the plans that is critical for studying the financial feasibility of expansion plans. If there is no flexibility, and the new operator or concessionaire is forced to make determined investments, it is possible that such investments may not be within the project's economic capacity or of the rate that people are able to pay. Therefore, the operator has to have a clear view of the priorities, what plans to execute, and the optimum expansion method. Therefore, in the ini-

tial stage, focus was placed on strengthening planning capacity, reviewing existing plans, establishing objectives and priorities, designing optimization and expansion based on technical, environmental, and minimum cost criteria. In other words, being able to expand the systems in such a way so as to take to the present value the minimum cost of the selected option, and not build idle infrastructure that does not amortize over the years. Therefore, the service expansion process has been gradual. Costs have been estimated, optimum expansion phases have been determined, and on that basis a financial and rate fixing plan has been established, and finally negotiations have taken place with the district and national

Produccion de aguya y tratamiento



Distribucion



bodies and multilateral entities to decide costs and expansion phases.

Water Production and Treatment

The company's first priority was to increase water production and treatment. The later was decided because of the very poor quality of water in Cartagena. Water production was increased from 165,000 m³ per day at 220,000 m³ per day and water distribution networks and the location of the storage tanks were planned for the different areas.

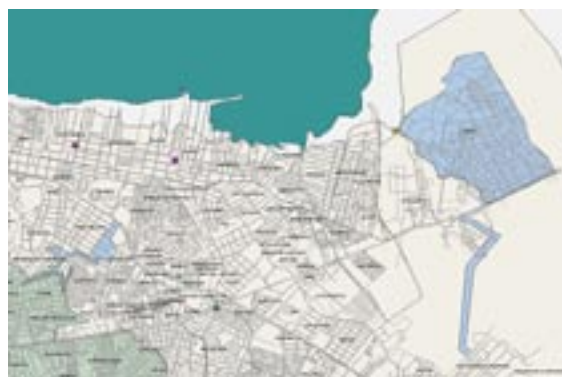
Expansion of the Sewerage and Treatment Systems and Final Disposal of Wastewater

Priority was given to the sewerage system, which was the most critical situation found, mainly because the areas surrounding the water bodies are coastal lagoons with a mixture of fresh and sea water. The

people living in that area are very poor displaced people that settled in the swamp banks (the Ciénaga de Tesca). Wastewater was discharged through the streets of these settlements. Wastewater was also discharged into the bay. Therefore, besides the population and health problems, water bodies were being contaminated.

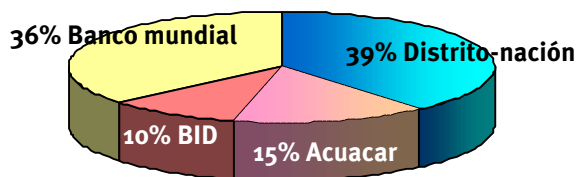
Another of the priority initial tasks was determining alternatives to solve this contamination problem. Several options were studied, different disposal methods, wastewater treatment, and water reuse. The alternative chosen for wastewater treatment and final disposal was a pumping system that collects all wastewater from the city of Cartagena and sends it along a pipeline 20 km long to a preliminary treatment plant, from where it is discharged into the bay through a submarine outfall 2.85 km offshore. This is the solution chosen by many coastal cities like Viña del Mar and Valparaíso, the area of Penco, Tome and the Concepción Bay in Chile and also in Montevideo, Uruguay.

Expansión de alcantarillado y sistema de tratamiento y disposición final de aguas servidas



Master Plan 1995-2004

Some figures clearly illustrate the size of the investment. They are from 1995 to 2004. US\$ 236 million have been invested, US\$65 million or 27% in water supply and US\$171 million or 73% in sanitation. The funds were supplied by Aguas de Cartagena which contributed US\$79 million or 33% of the investment, with own investments and bank loans, in this case the IDB. The District and the Nation contributed US\$157 million or 67% of the investment. Funding was organized with own resources on one hand (15%), the contribution of the District and the Nation was 39% own funds including US\$ 20 million, and World Bank and IDB contributed 36% and 10%, respectively. The funding chart up to 2004 clearly shows this.



Performance and Achievements

Indicators

The performance and achievements indicators reveal the improvements in quality, quantity and service continuity.

The number of subscriber in 1996 was 90,000 and it has grown to 130,000 subscribers in the water service; in the sewerage service we have grown from 69,000 to 98,000 subscribers. I would like to emphasize that the segments benefited with these investments are basically segments 1, 2 and 3, some like 4 and 5 are now growing due to the new expansion program and new developments. But the poorer segments are the ones that have benefited most from water and sewerage improvements.

This year, water coverage has reached 95% and sewerage coverage is 75%, but plans are to com-

plete sewerage coverage next year reaching 95% coverage.

Service continuity is 24 hours a day, effective coverage compared to 7-15 hours previously. We are not talking only of connections but sufficient water supply.

A significant change, that made it possible to displace some investments, was water production works. Water capacity was increased but later on with the strategy of controlling losses, water production and water treatment has been smaller. This is worth noting, because we are serving a significantly larger number of customers with 24-hour effective coverage with approximately the same water production existing in 1994 or 1995.

Regarding the rate of water not accounted for, we are aware that loss levels are still high. But progress has been made by dividing the city into sectors and we are implementing strategies to reduce losses to an economically viable level (21-22%), which we plan to achieve in the coming three years.

We have improved customer service reducing waiting times in invoicing.

Collection increased from 40% to 95%.

Measurement coverage also increased, and today it is 98%. Practically every user has a water meter.

The time of response fell from 6 days to less than 1 day for repairs. Waiting time for customers to be served at the company has fallen from 31-32 minutes to 12 minutes at present with an automatic system. It is measured, the customer is served and his problem is addressed.

The rate of complaints has also fallen considerably. At the beginning, complaints were related to the institutional change, the change in fees that occurred after 1996, and this had to patiently explained to customers, but with the passing of time and their understanding the changes, complaints have diminished by almost 25% to an estimated 6000 complaints this year.

Rationalization of the labor force is also an efficiency indicator we are using. Before private participation there were 14 employees per 1000

connections, which were later reduced to 7 employees per 1000 connections, and today there are 2.3 employees per 1000 connections. Like the system automation, this permitted to direct resources to investments needed. People dismissed were trained, and many of them now provide associated services like meter reading or invoice distribution.

Technological Improvements

Automization

The technological changes have basically been the automation of the entire water production, treatment and distribution systems. All of the pumping stations and main pipelines are managed with remote commands and remote controls from the control center that manages the water supply and sewerage systems.

Documentation Automization

All documentation was also automated, which means that all documents are scanned, and all

users can have access to their bills and consumption. Company employees can also have quick access to this technology.

GIS

A fundamental aspect for the technical system has been complete, updated information through the geographic information project, which has evolved and now is support for the loss control plan and for the commercial system. At present the GIS not only provides information about pipes but also about the customers connected to the system.

Mathematical Models

It also interacts with mathematical models basically in water and sewerage, making it possible to obtain models and optimize the entire system's expansion and operation.

Management and Monitoring Indicators

A system of management and monitoring indicators was created that permanently supports the

Telemando y telecontrol



areas providing them with feedback about the evolution in each area. This system is supported by the ISO 9002 quality system that we have since 1997, and the ISO 14000 underway for the environmental management system, which is the following goal or challenge that we have set ourselves with regard to the management systems.

Environmental Aspect

I have been asked to say something about the environmental aspect. In addition to solving the problems I mentioned above, we have designed a strategy to declare the Ciénaga de la Virgen a natural park with a special management system so it can be recovered. Therefore, we will not only eliminate wastewater discharge in the area but also permit water there to be a usable resource both for the people of Cartagena and visitors. Also an environmental monitoring plan is being conducted assessing the water bodies of the Ciénaga, the coasts of Cartagena and the Cartagena Bay. There is a very strict urban impact manual that makes it possible to execute environmental intervention without causing any impact with the construction of works. Also discharges of small industries are controlled to prevent them from discharging wastewater into the sewerage system.

Social Aspect

Although providing water and sewerage systems has a social connotation, several other social components have been added like urban rehabilitation consisting of providing 5 community centers in strategic areas of the city so that the community may have places to meet and develop different kinds of activities, whether political, recreational or information. A strategy is being implemented to strengthen organizations in terms of water awareness. There is a permanent social communication system with a community or a centralized center, providing support to community development and in those places where connection works are being developed, people have been trained to carry out unskilled work so that they carry out the installations, they are paid

for the work, and they feel that they are contributing to their community's development. Services have also expanded to an area quite distant from Cartagena that does not have water or sewerage services, known as the North Area of Cartagena.

Advantages of the Mixed Enterprise Model

I would like to summarize some of the social advantages of the experience. Increasing water and sewerage service coverage, increasing the systems' reliability, improving the quality of the water supplied, and the improving customer service. From an economic point of view we have two major advantages: the private partner's professional experience and management efficiency, which has resulted in saving costs and greater service efficiency. The private initiative contributes the human and economic resources necessary for the appropriate service provision, and from a functional point of view, the private initiative has contributed the technology and specialization required by these kind of services.

Conclusions

As a conclusion, the model -organized as a mixed economy- has made it possible to improve and expand water and sewerage services and has significantly contributed to increase service quality. The local and national institutional support and commitment has been fundamental for organizing an institutional system, not only because of the financial support, but also because of the technical assistance provided and the task of following-up that the national government has commissioned to Carmiña Moreno, the head of the Water Authority. And particularly, despite the governmental changes, the authorities' commitment has remained intact so that this is only the first of many other cases that are taking place in Colombia.

It is essential to have a clear, stable regulatory and rate system. This has to be mentioned because every time a regulator is changed, that

person brings new ideas, creating a feeling of uncertainty and insecurity in the operators. Therefore, the message is that changes be carried out gradually because operators need stable rules.

The overall effect of technological and regulation innovation in the markets have offered public monopolies facing efficiency problems new alternatives. Although it is not the panacea, the option of incorporating the private sector in the provision of specialized services like these must be considered. Changes and improvements require a specialized, experienced, committed, highly-devoted operator, which may contribute resources and technology.

The technical and financial feasibility of the expansion plans must be carefully analyzed with a minimum cost criteria; initial plans should be sufficiently flexible; and rates must be consistent with the investment programs, consumption patterns and payment capacity. It is not always possible to transfer the entire investment cost to rates, and this is a restriction that we faced in the Cartagena case because of the population's social-economic situation.

The size of the economic requirements and local

and sectorial restrictions require designing consistent, long-term strategies, and the viability of the investment program depends to a great extent of long-term funding and the support of the multilateral banking. This has been a key element, because in less developed economies, long-term funding and rates are fundamental to execute these investment plans.

Risks have to be carefully assessed and along with the public sector, all the steps should be taken to mitigate them. The truth is that despite all the steps that may be taken to reduce risks, these never disappear; therefore, along with the local and national governments one must be permanently alert in order to reduce them when they appear. The principal risk in Colombia at present is public order risk due to the country's armed conflict.

Finally, the company model will be applicable and effective depending on local conditions. The model cannot be exported to any other place guaranteeing that it will work out. The model has to be adapted to the country's conditions, regulatory framework and socioeconomic situation. ■



Urban Water Supply in Cartagena de Indias

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Background

In 1995 the Municipality of Cartagena, Colombia, signed a 26-year affermage contract with Aguas de Cartagena (AC) for the operations of UWS within the territory of the Municipality of Cartagena. Aguas de Cartagena is itself a joint venture between the Municipality of Cartagena and a global private water utility, Aguas de Barcelona. This background paper examines the pro-poor element within this public-private partnership (PPP) and its implications for capacity-building within the Municipality of Cartagena. Section one outlines the wider political and economic, regulatory and participatory context within which this PPP evolved. Section two describes the institutional arrangement for WATSAN in Cartagena. Section three outlines the content of the affermage contract and the water needs of the poor. Section four critically examines the two major pro-poor initiatives carried out within the framework of the public-private partnership. Section five concludes by identifying a number of areas where capacity building is needed in order to improve the role of the municipality in support of the pro-poor element within the public-private partnership for UWS.

The Political Context

Colombia is a unitary state with three levels of government - national, departmental and municipal. There are 32 departments and 1,053 munic-

ipalities in the country, which has only recently emerged from a century of extremely centralised government. Until 1986 the national executive appointed municipal mayors, and departmental governors were appointed until 1991.

The Municipality of Cartagena is the largest municipality and capital of the Department of Bolívar. It has an estimated population of 850,000 (2000). The municipal budget for 2000 was 354,348m. pesos (approximately US\$177m), giving a per capita expenditure of \$208. The municipality is governed by a directly elected mayor (alcalde) and a legislature comprising nineteen councillors (consejales). The municipality is divided into fifteen districts (comunas), each of which has a directly elected body, known as the Junta de Administración Local (JAL), comprising nine persons (ediles). The mayor, councillors and JAL members are elected concurrently for a three-year term of office. Unlike the others, the mayor may not seek immediate re-election. The district is divided into a number of neighbourhoods (barrios), of which there are a total of 265 in Cartagena. Each neighbourhood that is formally recognised by the municipality has an elected body, known as the Junta de Acción Comunal. Despite the considerable level of fiscal transfers from central government, municipal expenditure on social development is surprisingly low. In mid-2000, the Department of Social Development had a staff of only 32 social workers. All operated from a central municipal office and none were based permanently in low-income neighbourhoods.



As in many Colombian cities there is a long history of municipal mismanagement and malfeasance in Cartagena that continues to the present day. The current mayor, Sra Gina Benedetti, was appointed by the president of the country in mid-1999 to complete the term of office (1998-2000) of the elected mayor, Nicolás Curi. He resigned from office in June 1999 following revelations of widespread corruption. New elections were to be held on 29 October 2000.

The politically-charged system of local governance means that senior municipal administrative staff rotate frequently in tandem with changes in the political leadership. This was also the norm in the municipal water company prior to its privatisation in 1995. Until the introduction of elections for mayors in 1986, the head of the water company changed as frequently as twice a year, in response to changes in the mayor appointed by the national government. After 1986 there was more stability, but not enough to ensure good management. The pattern was as follows. Towards the end of his three-year office, the incumbent mayor would seek to provide political support to his chosen successor. In order to ensure votes for that candidate, the mayor typically approved a range of investment projects (including UWS) in parts of the city where votes were most needed to win the election. This «political» basis for investment decision-making meant that long-term planning of basic service provision was made impossible. This situation also meant that the city lost credibility with the World Bank because of the absence of serious long-term planning for basic service provision. The new private contract arrangement (see below) has the advantage of insulating the planning process from these short-term political considerations, so enabling the municipality to access loan finance from the World Bank.

The Economic Context

Like the rest of Colombia, Cartagena is currently enduring a protracted economic recession that is largely the product of high levels of insecurity brought about by a worsening civil war. The tourist industry, which is the mainstay of the local economy, has been adversely affected in two

ways. First, the number of international tourists has dropped because of the poor international image of the country. Second, domestic tourism has suffered because of the economic recession in the rest of the country. In mid-2000 the city has an unemployment rate of 22%, somewhat higher than the national average (19%).

The prevailing poor economic performance of public service provision, itself linked to endemic clientelism and corruption, was a major factor in explaining citizen support for PSP in UWS in Cartagena. By the mid-1990s the municipal-owned Empresas Públicas de Servicio (EPSs) encharged with public service provision were in crisis. Water was no exception. Water losses exceeded 50%. Current revenue did not even cover operating costs, producing a financial deficit that was a growing drain on municipal finances. There was no money to pay for chemicals to treat water. The lack of an operating surplus meant that investment in maintenance and network extension had ground to a halt. Customer service was very poor, with constant interruptions in water supply and unacceptable levels of turbidity.

The Poverty Context

The distribution of income in Cartagena is more unequal than the national average. In accordance with national directives, the Secretariat for Municipal Planning has divided barrios into six categories (one through six), according to the level of unsatisfied basic needs. The latest available data gives the following breakdown of the municipal population by category:

Category One Very poor	31%
Category Two Poor	30%
Category Three Medium-to-poor	23%
Category Four Medium	11%
Category Five Medium-to-rich	4%
Category Six Rich	1.4%

Source: Department of Planning, Municipality of Cartagena

In 1995 the national government introduced a social welfare programme, known as the Sistema

de Selección de Potenciales Beneficiarios (SIESBEN). Municipalities administer this programme and they identify low-income households primarily on the basis of the type of house construction. Household members are classified into three categories with corresponding entitlements, primarily in health and education. From 1995-2000, a total of 543,208 persons in Cartagena, over half of the population, were registered for entitlements under SIESBEN.

A major cause of poverty in Cartagena is internal displacement caused by the civil war in Colombia. The municipal Department of Social Development estimates that there are some 320,000 displaced families in the municipality, although this is thought to be an under-estimate. Most of these have arrived since 1992 and many of them are female-headed households. A special national government programme offers assistance to displaced persons. However, in a recent ruling a minimum five-year residence is required in Cartagena for citizens seeking entitlements to SIESBEN. At the same time, such proof of a five-year residence in Cartagena automatically terminates the «displaced person» status.

The Regulatory Context

In 1994 there was a major change in national government policy toward basic public service provision. A new law, Law 142, marked a radical shift towards a more positive attitude towards the private sector and opened the door to PSP in public service provision in Colombia for the first time. In response to this situation, the Municipality of Cartagena became a pioneer in Colombia with regard to the introduction of PSP in basic public service provision. It was the first city in the country to privatise its electricity supply and also one of the first to introduce a private concession to operate its airport. It was also the first city to introduce a public-private partnership for UWS, with the creation of Aguas de Cartagena.

At the same time, Law 142 made provision for strong regulation of PSP in basic public service

provision. Article 69 created separate regulatory commissions for electricity and gas, telecoms and WATSAN. The WATSAN commission, known as the Comisión de Regulación de Agua Potable y Saneamiento Básico, reports to the Ministry of Economic Development. Article 76 of the same law created a national regulatory body, the Superintendencia de Servicios Públicos Domiciliarios, with separate departments for WATSAN, electricity and gas, and telecom. Article 62 required that citizen watchdog committees, Comités de Desarrollo y Control Social, should be established in all municipalities where PSP has been introduced in basic public service provision. Membership of these committees is restricted to users of the respective services.

The Participatory Context

In 1991 a new constitution defined Colombia as a participatory democracy. Several of its articles opened up opportunities for citizen participation in the economic life of the country. Colombia now has more institutional mechanisms than any country in Latin America designed to safeguard transparency in government and to strengthen citizen participation in democracy. Some of these derive from 33 articles in the 1991 Constitution. Others derive from Law 134 of 1994 and Law 388 of 1997 that were designed specifically to promote citizen involvement in local government. Among these mechanisms are:

The «voto programático» under which candidates for the post of municipal mayor must present a programme to the electorate during their election campaign.

The system of «veedorías populares», or local watchdog committees, under which citizens are able to monitor basic public service provision and specific public investment projects. In Cartagena, the «Comisión de Control y Vigilancia de los Servicios Públicos» includes UWS within its brief.

The possibility of referendums, at the request of 10% of the municipal, departmental or national electorate.

The «derecho de petición» under which citizens may appeal for a mayor's mandate to be revoked

before its expiry because of poor performance. The «audiencias públicas» under which the municipal authorities must arrange public meetings in order to allow discussion and criticism of their plans and performance. The requirement that citizens should be consulted when municipalities draw up the statutory municipal development plans, known as «Planes de Ordenamiento Territorial» (POT).

In Cartagena, this new raft of legislation encouraged the formation of citizen organisations aimed at confronting the endemic corruption and crisis of political leadership in the city. In 1993 an NGO was created with the specific objective of campaigning for clean governance of the city. Known as the Fundación Cívico-Social Pro Cartagena (FUNCICAR) (<http://www.funcicar.org>), it was the instigator of the first citizen watchdog committees (veedurías ciudadanas) in Cartagena. FUNCICAR is also a founder member of the Colombian chapter of Transparency International. It is participating in the work of the Social Control Board of Cartagena (Frente de Control Social por Cartagena) which is monitoring the implementation of the new Master Plan for Water and Sanitation (Plan Maestro de Acueducto y Alcantarillado). In June 2000 FUNCICAR began negotiations with Aguas de Cartagena (AC) for the introduction of an «Integrity Pact» for the tendering process for major construction contracts to be awarded as part of this Master Plan. This initiative has the strong support of the World Bank, which is a major source of funding for the Master Plan.

The Institutional Arrangement for WATSAN

Municipalities retain the formal responsibility for WATSAN in Colombia. However, their legal obligation to provide WATSAN is confined to the so-called «urban area» within the municipal territory. In 1997 Law 388 introduced the concept of local-level planning. This made it obligatory for municipalities to prepare individual master plans for their physical

development, known as the Plan de Ordenamiento Territorial (POT). In fact, most municipalities (including Cartagena) have not yet approved their own POT, primarily because of the lack of human resources and finance needed for their preparation. A controversial aspect of the POT is the requirement that the intra-municipal area for which the municipality has the legal obligation to provide WATSAN should be restricted to a demarcated «urbanised» area within the municipal territory. This measure has been widely interpreted by observers as a convenient legal «trick» by which municipal authorities may avoid responsibility for WATSAN provision to poor neighbourhoods on the edge of the city on the grounds that they are not located within the «urbanised» area of the municipality. It may also be used as a means to restrain land invasions on outlying areas of major cities. In practice, the provision of WATSAN in the remaining rural parts of the municipality depends on the support of the Departmental government.

The Public-Private Partnership and the Needs of the Poor

The Affermage Contract

The institutional arrangement for managing WATSAN for Cartagena is in the form of a public-private partnership. A company, Aguas de Cartagena (AC) was created on 30 December 1994 as a joint venture between the Municipality of Cartagena and Aguas de Barcelona, a subsidiary of the French utility company, Compagnie Suez Lyonnaise des Eaux. It was the first public-private partnership for basic public services to be created in Colombia.

The negotiation of the joint venture between the public and private sectors for UWS in Cartagena was controversial, and at first it was opposed by powerful groups. The tendering and bidding process for the contract was negotiated by the outgoing mayor Gabriel García (1992-94) and the adjudication was completed the day before he left office in December 1994. The incoming mayor,

Guillermo Paniza (1995-97) had campaigned actively against the terms of the contract negotiated by his predecessor. This had envisaged a 50% shareholding by Aguas de Barcelona, a 40% holding by private investors and a 10% holding by the municipality. Paniza argued that the spirit of the pioneering legislation (Law 142 of 1994) introducing private capital in basic public services called for a minimum public sector participation of 50% in any joint venture. He also feared that the low value of the paid-up capital of the new joint venture company would put ownership of the 40% of the shares earmarked for private capital within the grasp of corrupt municipal politicians who had been involved in the negotiations carried out by his predecessor.

The original intention of Paniza was to annul the contract altogether and return to the previous arrangement under which WATSAN in Cartagena was owned and operated by a municipal company. However, during a four-hour discussion in Washington, the World Bank project manager made it clear to Paniza that PSP involvement was a pre-condition for future Bank funding for the WATSAN sector in Cartagena. Paniza then dropped his objection to PSP and renegotiated the terms of the joint venture with Aguas de Barcelona. In order both to strengthen municipal involvement and to avoid the danger of political interference from a large local private share participation, the shareholding earmarked for the Municipality of Cartagena was increased to 50%. The shareholdings of Aguas de Barcelona and private local capital were reduced correspondingly to 46% and 4% respectively. Furthermore, the 50% municipal shareholding would be in the form of «goodwill» and was not paid in cash. At the insistence of Paniza, the shareholding arrangement was also amended in order to incorporate an employee share ownership scheme. The initial share capital of AC was \$8.8m, of which 50% is owned by the Municipality of Cartagena, 45.91% by Aguas de Barcelona and 4.09% by private Colombian investors, of whom a majority are company employees. The Board of Directors of AC has five members - two appointed by the municipality, two by Aguas de Barcelona and one repre-

senting local private share holders. Board decisions require a majority vote of 80% of its members. In practice, this means that there must be a consensus between the municipality and Aguas de Barcelona on important issues affecting the company.

AC then signed a 26-year lease (affermage) contract with the Municipality of Cartagena for the management of water and sanitation in the city. This contract came into operation on 25 June 1995. Although it did not sign a concession contract, AC was entrusted with managing a major WATSAN investment programme, the Plan Maestro de Acueducto y Alcantarillado, on behalf of the municipality. This investment programme is financed mainly by loans from the World Bank (\$85m) and the Inter-american Development Bank (\$24m).

In addition, Aguas de Barcelona (AgBar) signed a fee-based management contract with AC for the day-to-day operations of the company. Remuneration for AgBar comes in two forms - its 46% share of the declared profits of AC, and a management fee, calculated as a share of the gross income of AC, that is paid to it by AC. In the first four years of operation, this management fee was fixed at 2.94%, 3.37%, 3.82% and 4.25% respectively of gross income. In 1999 AC declared profits of \$1.96m. In the same year, AgBar received a total of around \$2,100,000 from its involvement in the Cartagena concession - \$900,000 as its dividend share and \$1,200,000 as its management fee.

Aguas de Cartagena: Financial Performance, 1998 and 1999 (in Colombian pesos)

	1998	1999
Gross Income	61,585m	57,642m
Operating profit	10,010m	11,511m
Net profit (after tax)	4,694m	3,927m
Dividend	1,800m	2,112m
Inflation rate	15.7%	9.6%
Unpaid bills	25,624m	30,692m

Source: Annual Reports 1998 and 1999, Aguas de Cartagena

«When the water supply was privatised, the municipality retained responsibility for payment of pensions to the staff of the former municipal-owned water company. This heavy financial obligation, currently 16,000m pesos per year (\$8m), reduces the funds available for social investment in health and education. This factor should be taken into account when evaluating the overall impact of PSP on the urban poor» - Councillor Alfredo Díaz, Municipality of Cartagena.

It is significant that, in response to the history of corruption and mismanagement in the UWS sector in Colombia, the World Bank insisted on PSP as a condition for further lending to the sector. From the Bank viewpoint, the presence of a major international water utility (AgBar) constitutes a guarantee both that its lending resources will be subject to allocative efficiency (e.g. in the selection of investment priorities) and productive efficiency (e.g. in avoiding over-invoicing in the awarding of contracts). From the municipal viewpoint, this insistence has meant that a partnership with a major international player (AgBar) was instrumental in accessing foreign soft loan funding for its expansion plans. And from the viewpoint of Aguas de Barcelona itself, the joint venture arrangement has the advantage of reducing the risk of foreign investment.

Nevertheless, this complex institutional arrangement raises a difficult question. The municipality is at one and the same time the owner of the concession (retaining ownership of the network assets) and operator (as the major shareholder in AC). This overlap in the division of responsibilities blurs the lines of accountability and has a potentially damaging effect on the transparency of management.

Improvement in Water Supply

There has been a noticeable improvement in UWS in Cartagena since the introduction of PSP in 1995. When operations began there was a water deficit of 60,000 m³ which caused periodic cut-offs in supply. AC soon eliminated this deficit

by reducing the level of unaccounted for water from 60% in December 1995 to 40% by December 1999. The reliability of water supply rose over the same period from 80% to 99%. AC has carried out \$30m in investment during 1995-99. Some 260km of new pipeline have been added to the network over the same period, bringing the total to 700km. Some 30,000 new connections have been made, bringing the total to 95,000. Some 220,000 m³ of water is treated per day and the water quality has improved. The number of employees was reduced from 494 to around 262, bringing the employee/connection ratio to an acceptable level of four employees per 1,000 connections. In 1999 AC declared profits of \$1.4m. Approximately 78% of the population were connected to the water network by 2000 and this is expected to rise to 95% by 2003.

The Institutional Arrangement and the Water Needs of the Poor

According to AC staff who previously worked for the former municipal water company, the new institutional arrangement has a strong pro-poor approach, in marked contrast to the municipal arrangement. The main reason is that, under sole municipal control, priority in new investment was granted to those parts of the city linked to the tourism, port activities and industry. Having largely solved the WATSAN needs of these sectors, the incoming AC has been able to devote its attention wholeheartedly to extending the network to outlying parts of the city, almost all of which are in the lowest neighbourhood classification (category 1 and category 2).

In the late 1990s, the municipality entrusted AC with the task of drawing up a master plan for WATSAN, the Plan Maestro de Acueducto y Alcantarillado. The new master plan has a strong pro-poor element. This is in sharp contrast to the water investment programme during the previous decades, when the tourism, industry and port sectors were given priority. For example, a master plan drawn up in 1992 did not even

consider the UWS needs of many low-income residential areas, because they did not fall within the «regulated» part of the city. In 1999 the World Bank signed a \$85m loan with the Municipality of Cartagena as part of a \$117m package to finance major priority investments identified in the new master plan. The national government contributed a further \$20m and AC contributed \$12m. The \$85m loan will be repaid by the municipality (90%) and by AC (10%). Although never specified in writing, it was a World Bank condition for this loan that the municipality entrust AC with the implementation of the WATSAN investment programme in order to end the previous practice of widespread over-invoicing on municipal water contracts. This decision provoked the hostility of local private contractors and their political associates on the municipal council.

As noted above, Cartagena is a long history of municipal corruption and an income distribution that is more skewed than the national average. The question arises: «Why should the political leadership engage in pro-poor policies?» One major reason concerns the need to garner political support in democratic elections as a result of the financial strengthening and greater autonomy granted to local government since the late 1980s. In this changed political context, local urban élites are now obliged to pay more attention to the demands of poor communities in exchange for votes. Such patron-client relation-

ships remain the bedrock of Colombian politics. Hence, the number of land invasions by homeless families increases at pre-election times, as a form of bargaining by the poor for material benefits in exchange for the offer of political support to elite contestants for municipal posts. The question also arises: «Why should the private sector engage in pro-poor policies?» According to the senior management of AC, there are two reasons. First, there is the moral principle of social solidarity. Second, there is the practical issue of finding use of excess water that is surplus to requirements as a result of the dramatic reduction in the level of unaccounted for water.

The Water Tariff Structure and the Poor

The main features of the national water tariff policy derives from Law 142. This states that the tariff must be sufficient to cover both operating and investment costs of water utilities. It also has a strong pro-poor element by making provision for cross-subsidies within the tariff structure, in the form of a «solidarity fund». As shown below, the water tariff structure in Cartagena does have a strong pro-poor element. The standing charge for households in the highest (6th) strata is over ten times greater than that for households in the lowest (1st) strata. For the lowest tariff step (0 - 20m3), households in the highest strata pay nearly four times more per cubic meter than households in the lowest strata.

Household strata	Number of h'holds	Standing charge (US\$)	Price per cubic metre 0 - 20 m3	Price per cubic metre 21 - 40m3	Price per cubic metre 41 + m3
Household strata 1	24,154	1.09	0.14	0.44	0.44
Household strata 2	31,297	1.24	0.17	0.44	0.44
Household strata 3	29,423	2.48	0.29	0.44	0.44
Household strata 4	7,755	3.57	0.35	0.44	0.44
Household strata 5	6,910	7.07	0.53	0.53	0.53
Household strata 6	5,359	11.35	0.53	0.53	0.53

Source: Aguas de Cartagena
Exchange rate \$1= 2,000 pesos (July 2000)





Pro-Poor Initiatives within the Public-Private Partnership

The two major pro-poor initiatives undertaken by AC and the municipality are in parts of the city known as Nelson Mandela and El Pozón. Both are very poor areas of the city. It is estimated that 50% of all displaced persons in Cartagena are located in Nelson Mandela and a further 30% in El Pozón. The following data indicates that the vast majority of residents of Nelson Mandela and El Pozón are entitled to SIESBEN benefits.

Location	Official population ^(*)	Population with SIESBEN entitlements	Coverage
Nelson Mandela (incl. Villa Corelia)	20,013	16,878	84%
El Pozón	31,056	30,459	98%

(*) Official population figures are well below the real population figures
Source: Carlos Rincón, head of Planning Department, Municipality of Cartagena

Barrio Lomas de Payé

This small community was founded in the late 1990s by 65 displaced families who fled to Cartagena from the violence in other parts of Colombia. When they first arrived, they camped out on pavements in the city centre. They approached the mayor for assistance. He advised them to find and occupy a suitable open space following which the municipality would arrange purchase from the legal owner. They chose a piece of unused land on the top of a small hill not far from the city centre. Thanks to their strong community organisation, they accessed small-scale funding from a European NGO for the construction of four small water tanks, after which AC connected the tanks to the piped network via a small pump and the foot of the hill. The community agreed with AC for the introduction of a collective billing system for water supplied to the tanks. This collective bill is paid for out of the proceeds of the direct sale of water in five-gallon plastic containers (canecas) to community members as well as to residents from surrounding barrios that are not connected

to the piped network. The sale price is fixed at 50 pesos per caneca. It is the same for community members as for residents of surrounding barrios. Daily sales average 300 canecas. The gross income exceeds the communal bill by a small margin. This surplus is used to fund urgent community needs. Currently these are: school meals (250 pesos per meal) for 25 deprived children and bus fares for community members undergoing training in furniture making with a view to establishing a furniture workshop in the barrio.

Barrio Nelson Mandela

The Nelson Mandela settlement, located in the extreme east of the municipality, is probably the poorest area of the city. It arose following a series of land invasions in the early 1990s, primarily by displaced persons fleeing from the civil war in other parts of Colombia. It was formally recognised on 7 December 1993 and by mid-2000 had an official population of 30,626 (5,469 households) grouped in 24 sectors. Unofficial estimates put the population much higher, at around 50,000. Nelson Mandela is not legally incorporated within the municipal administration. Instead it was granted a special status outside the administrative system of comunas.

This is significant because, according to the 1997 urban planning legislation that created the Plan de Ordenamiento Territorial (POT), the responsibility of municipalities to provide WATSAN is confined to the legally-defined «urban area» within the municipality. By placing Nelson Mandela outside that area, the municipality was effectively denying its responsibility for service provision to the barrio. This means that, in practice, some responsibility for water and sanitation in Nelson Mandela lies with the departmental government, and not the municipality. And because of this legal impediment, AC argues that it cannot invest in Nelson Mandela, as it still falls outside the «urban sanitation» area to which it must extend coverage under the terms of the 1995 contract. For that reason, one of the main demands of residents is for Nelson Mandela to be re-located within the urban area, by creating a new «comuna».

macro-meter, which usually comprises more than one sector, is billed collectively. The leaders of the respective community organisations, Juntas de Viviendas Comunitarias, are responsible for organising payment of a standard contribution by each household. In the first half of 2000 households were typically paying a monthly average of around US\$ 1.2 for between 7-8 m³ (see table below). From the viewpoint of AC, the new system has the advantage of encouraging a «payment culture» among residents, as a stepping stone towards the introduction of individual household connections.

But the system of collective payment by macro-meters has some disadvantages. First, there are commercial establishments in Nelson Mandela (e.g. a private health centre) that consume large

Location	Average monthly household consumption (m3)	Average monthly household bill (US\$)*	Share of bill paid to date
Macrometer 0758(556 households)	6.4	1.06	26%
Macrometer 0688(120 households)	7.6	1.17	46%
Macrometer 0890(194 households)	7.4	1.17	21%
Macrometer 01522(135 households)	7.6	1.17	10%
Macrometer 01516(1,188 households)	2.1	0.33	25%
Macrometer 0691(422 households)	2.9	0.46	84%
Macrometer 284490(444 households)**	8.4	1.20	42%
Macrometer 106769(330 households)**	8.2	1.17	26%
Macrometer 284039(170 households)**	9.5	1.35	50%

Source: Author's calculations based on primary data supplied by AC

ing system, residents who resell water are billed the same as those who do not, even though their consumption and capacity to pay are both much higher. Third, some householders simply refuse to contribute to the communal bill. In the Édén

sector visited in this research, some six households out of a total of 75 had not paid the communal charge ever since it was introduced at the beginning of 2000. The increased financial burden that this causes to the majority of households who do pay may prove to be a source of conflict in the future.

El Pozón

El Pozón is one of the fourteen comunas (districts) within the Municipality of Cartagena, and is officially referred to as Comuna 6. It has an estimated population (Year 2000) of 38,000 and is the fastest growing area of the city. Within El Pozón there are an estimated 42 barrios, of which 27 are officially recognised by the municipality. All barrios within El Pozón are classed as Category One - the category with the highest level of unsatisfied basic needs. There is virtually no industry in the whole of El Pozón. The pipe network in El Pozón is inadequate, of narrow diameter and of poor quality. Many, if most connections are illegal. As a result, the supply arrives intermittently (four days per week and 12 hours per day at the most).

Most residents of El Pozón still buy their water from private water vendors. These vendors are often residents who live on the asphalt road where there is connection to the pipe network. Although technically illegal, AC tolerates the resale of water. These vendors re-sell water in five gallon (20 litre) plastic containers, known as canecas. The cost varies from 50-250 pesos per caneca, depending on two factors - distance from the distribution point and the availability of alternative supply. There are two principal alternative sources of supply. First, there is an intermittent but unreliable supply of free water from tankers belonging to AC. Second, during the rainy season, residents store rainwater for domestic use. The fluctuation in the sale price of water is extremely sensitive to variations in these two alternative sources of supply. During the dry season, and when AC tankers do not appear for a long time, it is not uncommon for residents to queue from 4am in order to buy

water from private suppliers. Assuming an average usage of five canecas per day per six-person household, and an average price of 100 pesos per caneca, household expenditure on water is 15,000 pesos (\$7.5) per month. According to calculations by AC, residents in Category One barrios such as El Pozón can expect to pay 6,000 pesos per month for water when connected to the piped network. For those residents currently paying 15,000 pesos per month, this represents a potential saving of around 60%.

As part of the World Bank loan, AC will undertake a major \$2.5m investment programme to radically improve water supply to El Pozón. Prior to the design of the project to be financed by the World Bank, AC carried out a consultation with the citizens of El Pozón. This took two forms. First, there was a consultation with members of the neighbourhood committees, Juntas de Acción Comunal. Second, there was a sample survey of 1,031 respondents, which was carried out by a local NGO, MPDL. The overriding benefit of the two surveys was to highlight the importance of devising appropriate mechanisms for payment of bills - mechanisms that would take into consideration the prevailing culture of daily management of the household budget.

Efforts are being made to reduce the financial burden of the connection charge and monthly payments in El Pozón. The standard household connection charge to the water network (including cost of the meter) is estimated at 213,000 pesos (\$106). The current plan is to spread the burden of payment as follows: a down payment of 30,000 pesos, followed by 36 monthly instalments of 5,170 pesos (at 1.19% interest). These payments would be added to the monthly water bill. However, it is feared that even this instalment system would be beyond the financial capacity of the poorest citizens in El Pozón, who live farthest from the main road in the following sectors: 14 de febrero, Victor Blanco and Santa Eduvigis. Hence, another possibility that is being mooted is a reduced connection charge of 150,000 pesos. In El Pozón, AC is also

considering the replacement of the standard monthly billing system in order to overcome the lack of a «payment culture». Instead, there would be a weekly billing system using mobile collection teams.

Areas for Municipal Capacity-Building in Support of Pro-Poor PPP

A number of specific municipal capacity requirements emerge from this case study - in strategic planning, skills development and organisational change.

Strategic Planning

Three specific issues concerning strategic planning emerge from this case study. First, the absence of a professional municipal career system in Colombia places real limitations on the sustainability of a pro-poor approach by local government. The terms of office of the mayor is short - three years - and not renewable. The deep-rooted practice of political clientelism in Colombia means that all departmental heads are confidence posts (*cargos de confianza*) appointed by the incumbent mayor. This institutional arrangement leads to a major change in senior and middle-level personnel every three years. This produces a serious lack of institutional memory on the part of the municipality in its involvement in pro-poor initiatives with the private sector. It means that there is no assurance of continuity in a pro-poor approach (except insofar as this is determined by nationally-determined programmes such as the SISBEN). It also creates the danger of sudden changes in the strategic priorities of the major shareholder in the joint venture. Fortunately, according to senior staff of AC, there has been a surprising degree of continuity to date in the views of the four mayors. The primary concern of all of them is that the network is extended as fast as possible into low-income parts of the city. It also means that there is institutional memory on issues to

do with the municipality's involvement in AC. In practice, this places the private sector (i.e. Aguas de Barcelona) at a great advantage in its negotiations with the municipality within the AC joint venture.

Second, at related to the above, ever since the creation of AC, the Municipality of Cartagena has lacked a technical advisory team on WATSAN. Despite the fact that the Mayor is president of AC, s/he attends its regular meetings without any technical support at all. This puts the municipality at a great disadvantage in negotiations with its joint venture partner, Aguas de Barcelona. The absence of such a technical advisory team also means that there is no institutional mechanism for channelling the demands/complaints/suggestions relating to the WATSAN sector into the negotiating stance of the municipality within AC. Instead, the mayor, the executive head of the municipality, assumes all such responsibilities. The creation of a technical advisory team would also overcome the lack of institutional memory of the municipality in the WATSAN sector, given the short mayoral tenure.

Third, the absence of a cadre of career-based senior municipal administrators means that decisions taken by local political leaders are often not translated into practice, either because they are shelved or simply forgotten. For example, community activists in Nelson Mandela complained that tripartite agreements usually fail because the municipality does not keep its promises. For example, in 1999 AC agreed to supply water tankers on the condition that the public works department of the municipality improved the steep access road so that the tankers could get through. But this did not happen and so, when it rains, the tankers are unable to reach Nelson Mandela. The residents complained that the same thing happened in the case of refuse collection. Here the community organised the delivery of refuse to collection points, but the trucks belonging to the privately-managed refuse company could not reach them because the access road had not been improved.

Skills Development

Skills development in order to combat corruption and to inculcate a «payment culture» for water emerge as major concerns from this case study. When asked how the municipality can be strengthened in its work in the WATSAN sector, almost all community leaders emphasised the priority need to eradicate political corruption, especially among municipal councillors. According to a former mayor, a major task to ensure the success of public-private ventures is for a massive training program for community leaders (in the JALs and JACs) who liaise between the municipality, AC and local citizens. Without such training, he feared that they were very susceptible to manipulation by corrupt municipal councillors, with deleterious efforts for the partnership as a whole. He expressed the same view with regard to the watchdog committees (veedorías) for monitoring public services that are envisaged in Law 142. Although the principle was to be applauded, he feared that they would be subject to manipulation by powerful political interests unless its members were given proper training.

Reflecting this concern, in 1998 the Municipality of Cartagena actively supported the creation of a training school for community leaders. The Escuela de Gestores Locales is located in the offices of the Department of Community Participation of the municipality. The initiative is a joint effort supported by a range of public and private agencies, including the National Audit Office, the Technological University of Cartagena, and several NGOs (FUNCICAR, Convergencia and Viva la Ciudadanía). The school trains community leaders who are members of JACs, JALs or local housing associations. The objective is to strengthen the independent leadership of community organisations and their capacity to access funding from public and private institutions. In this way it is hoped to break down the common practice of political clientelism, under which corrupt politicians manipulate community organisations and their leaders. No formal qualifications are required for entry to the 10-month course. There

were 56 students in the 1999 promotion and a further 65 in the current Year 2000 promotion. Students undertake a full day of lectures every three weeks, interspersed with weekly tutorials. In addition to the class work, course members prepare a plan for a community project. In 2000 the course members submitted a collection of local development projects to the mayoral candidates for the October 2000 municipal elections. The priority projects were the outcome of widespread consultation by course members within their respective communities.

A major concern of all stakeholders is the need for a cultural change with regard to the use of water by poor residents and the adoption of what is called a «payment culture» (cultura de pago). A very important issue, raised by most interviewees is that the poor residents of the city are used to paying daily for their water. They virtually all work in the informal sector and so manage their household budgets on a daily basis, as there is no security of income over the short-term, let alone the medium term. For this reason, the change to monthly billing for water is problematic, even when the daily equivalent of that charge is considerably less than what they are currently paying for water from private vendors. The municipality has a major role to play in encouraging this cultural change.

Organisational Change

The questions of citizen participation and regulatory co-ordination emerge from this case study as major issues of organisational change. Although there is extensive legislation to promote citizen participation in local government, in practice many of the plethora of institutional mechanisms for safeguarding transparency and defending the rights of ordinary citizens exist only on paper. For example, in theory a Committee for Social Monitoring of the Water Supply (Comité de Control Social para Agua) exists in the Municipality of Cartagena, but it appears not to function. Similarly, the municipal-wide Master Plan for the development of the city, the Plan

de Ordenamiento Territorial (POT) was drawn up without citizen participation, even though the procedural norms require such consultation. There is a strong need for the municipal administration to have more regular contact with the JACs, with which they are at the moment largely unconnected.

A plethora of different regulatory and supervisory agencies exist for UWS (Superintendencia de Servicios Públicos, Comisión de Regulación de Agua

Potable y Saneamiento Básico, Contraloría Nacional and Departamental) but there is a problem of co-ordination, conflict of interest, and overlapping jurisdiction among them. For example, the national water regulatory body, Comisión de Regulación de Agua Potable y Saneamiento Básico, does not co-ordinate with the municipality. Paradoxically, although the contract with AC requires an audit process (interventoría) by the municipality this has not taken place. ■





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Cartagena

Discussion

Francisco Sabatini

I want to say something about a point which I consider critical, the scarcity of technical teams in public agencies to enter into these kinds of complex working agreements between the private and the public sectors. The truth is that I would like to know the opinion of the speakers from Colombia about this matter.

I think it is a critical issue because, as the fundamental objective of a private company is the rate of return, what happens is that when no technical teams are involved on the side of the public sector, a good negotiation may not be made in the sense that there will always be the idea or the threat that if the public agency perseveres in terms of its own rationality -common good- this may be interpreted by the private company that these new conditions may attempt against the project's overall profitability. In my opinion a good negotiation may not be made if sufficient technical information is not available, and that requires that the public agency be in conditions of giving an opinion about the project's profitability independently from the private sector's point of view and information. It seems to me that it is a critical issue and I would like to know what you have thought about this in Colombia, from the public sector's perspective.

Carmiña Moreno

Obviously, when I made my presentation about the Cartagena case and other cases, which is what we call the first generation projects, we had not finished developing Law 142 and its regulatory framework. Therefore, I think that there are some loose ends in these initial processes that in the later generation projects we have tried to strengthen, specifically regarding technical capac-

ity in the Municipality. We are making sure that a fixed amount is set aside in the contracts to have some kind of advice and supervision in relation to the contracts. We have not established a percentage because the idea is not to create a bureaucracy at the Municipality but instead minimal highly-qualified technical bodies that will permit the Municipality to guarantee fulfillment of contract terms.

Luis Pinzón

I would like to add something. The period of a mayor in Colombia is 3 years, therefore there is a change every three years, and, as we saw, the Mayor is the president of the board of directors and also of the team that is with him. Our experience is that we have had 4 mayors in this period, 4 different partners with different ideas, different expectations, different interests. Fortunately the water and sanitation policy has not changed, which is the most critical problem in Cartagena. There are also significant health and education problems. The fact is that this association has allowed the Mayor and the Administration to have one problem less, or at least a smaller problem. Our Mayor is currently not here because he had to address other priorities and public problems such as public health, education and security.

But the important thing is rationalizing the amount of information required from the operator in order not to demand excess information by the controlling entities. For example in the structure that Carmiña Moreno presented, there were 3 controlling entities. The Regulating Commission, which establishes the rules and which requires information; the Superintendence that controls and follows each technical, financial, economic, service quality aspect; and then there is the District Con-



trol Office that is the entity in situ controller of the district of Cartagena, the General National Control Office, which also requires information, the Regional Autonomous Corporation which is involved with environmental and public issues; the environmental ministry, etc. In other words the Operator is required to provide such an enormous volume of information, which many times is duplicated.

We feel that we have had a very direct, honest relationship with the different Mayors about the operations that are being carried out, and the fact that after 4 different Mayors we are still operating shows that the system has worked.

There are many problems in Cartagena, and the city is in its majority made up of very poor people, with very big national problems, with a developing economy, without developed capital markets, but we are gradually developing strategies in order to advance. Mr. Nickson's visit coincided with a time when we were planning and designing plans, we were in negotiations with the World Bank, and these things take a lot of time. And taking pictures at that time may have given him an incorrect or incomplete impression of what things are like at present. The situation has changed very rapidly and that is why I was inviting you to visit Cartagena to see the goals we have achieved.

Lilian Saade

I would like to make a brief comment about the duration of the Mayors in Colombia. You were saying that 3 years is not enough. I think that the three-year period is not the problem. If a Mayor is bad it would be good if he lasted only 6 months in his position. The problem is accountability, rendering accounts and assuming responsibility. Also, I think that having so many institutions involved may complicate things.

Ricardo Jordán

The truth is that listening to the Cartagena case, I think that there is an honest effort to make a clear and categorical transfer of the production of a private good to the production of a public good.

There are explicit, concrete considerations about the concern for demand and not only supply in the production of this public good. I believe more in the intention than in the facts, as we saw in the latest presentation.

I would like to have an explanation about rate definition, because you have stated that the criteria for rate fixing are not only economic and financial, but also solidarity and income redistribution criteria.

Carmina Moreno

Regarding rate fixing, the Colombian constitution establishes equity, solidarity principles, which have been incorporated into the rate fixing formulas. Basically, rate-fixing formulas involve different charges. Certain charges are administration costs, average operation costs, and a variable cost that is the average investment cost. When we talk about solidarity and subsidies, basic subsidized consumption is up to 20 m3 per month, higher consumptions pay the economic cost. Therefore, the rate-fixing formulas define the economic costs paid by level No. 4. Domestic consumers are classified into 6 levels. 1, 2 and 3 are subsidized and level 4 pays the economic cost. Levels 5 and 6 pay (industries and businesses). Therefore we have crossed subsidies. We are currently trying to eliminate subsidies. Before the law started operating, levels 1 and 2 got higher subsidies. We have until 2005 to reach the amounts established by law of 50%, 40% and 15%. And only 20 m3 are subsidized, which we call subsistence consumption. We are studying this and contemplating to lower this limit to 15% - 18%. But for now it is at 20%. That is the principle of subsidies. What are we questioning ourselves? The crossed subsidy is definitely not sufficient. There are much more people that do not pay than the ones that pay, but the municipality has other resources and there are two ways of subsidizing: you subsidize offer or demand. We could do it in both ways. A law was submitted to congress to create a national fund and we might decide on a subsidy similar to the one you have in Chile, which is a clear subsidy to demand. At present we are subsidizing offer in small municipalities, through these types of contracts.

Edgardo Castañeda

I am going to talk about the water commission of the Federal District of Mexico city. We have a totally different criteria than the one in Cartagena de Indias because water administration in Mexico is absolutely under State control. And as you will see in my presentation later on, I consider that the State can be efficient in providing a service. Our criteria is totally different. We are particularly concerned about providing a good service and not profitability. I would like to ask you about the price of the most inexpensive water in Cartagena. In Mexico City the cheapest water we deliver costs 10 US cents per m³, and in Mexico city 99.25% of domestic users get subsidized water. I would like to see what the indices are in Cartagena to have an economic idea in that regard.

Carmiña Moreno

I would like to tell you that the principle is not that the State is inefficient, and that the private sector is the only one to provide a good service. We are not interested in who delivers the service. In Colombia we have efficient public companies, like the public enterprises of Medellín and many others. For us private sector participation is more a means than an end per se.

Edgardo Castañeda

You did not answer my question.

Luis Pinzón

Yes but you must remember that Ms. Moreno is not in the Cartagena context but rather at a national level.

In the existing crossed-subsidy system, the poorest segment, level 1, is charged 19 US cents per m³ of water. The monthly average invoice of a user in this level 1 is US\$ 6 per month for water and US\$ 3.5 for sewerage, which makes a total of US\$9.5 for both services. But I would like to add that when people did not get the service and had to buy water from private vendors, they bought it at a much higher price and with very deficient quality. Daily spending in water was US\$1, which makes US\$30 per month. At present the people have a continuous service and are paying less.

We are also trying to promote saving habits. Most of these people have a daily income and they do not save in order to be able to pay their monthly water bill, at present they are allowed to pay either weekly or fortnightly in order to see if they are able to pay their bills.

Edgardo Castañeda

I only want to state that the minimum cost of water is twice as much as that in Mexico, and in Mexico we do not charge for the sewerage service. In addition, we pay the State for use of water in block, in other words, we pay for every m³ that we extract from the subsoil. The water company of Mexico City pays the State 150 million dollars per year for the water it uses that it buys from the Federal Government. In fact, rather than buying the water it pays for the right of using the water. I think that the problem is not whether it is a private or government initiative but whether it is an efficient or inefficient operator.

Luis Pinzón

There is a specific point that I would like to explain to you. The fact that a private company is now operating in Cartagena did not have any influence on the radical change in the rate-fixing system. It was established as a result of mandatory law for all municipalities. Also I would like to point out that each system has its own particularities, if it is through pumping or gravity. I would not like you to get the idea that the system changed due to private sector participation. In fact all the companies in the country had to change their rate system in accordance with the methodology established. We must also remember that water in Cartagena is brought by means of a pumping system from a distance of 45 km. The sewerage system, because of the topographic characteristics of the area, also operates with a pumping system, and this significantly increases operating and maintenance costs.

I also would like to clarify one point regarding Mr Nickson's allusion to Barrio Nelson Mandela and the fact that it is not included in the urban area. The problem is not only that it is not in the urban



area, the problem is that there are risk areas in the Nelson Mandela neighborhood and, therefore, these areas have to be treated in a different way. There are 6 sectors in the Nelson Mandela sector where water and sewerage systems are being installed but there are other sectors where personnel cannot go because of risk for their lives. Therefore it is not as ridiculous as he mentioned that they be left out, it is a question of security.

Manfred Wilhelmy

I would like to make a comment as a non-specialist. I found the pro-poor and non pro-poor reflection very interesting. And also, the explanation about security. I think that the distinction between pro-poor and non pro-poor could be less categorical than what I understood from the comment of professor Nickson, because supplying good-quality water in a timely manner to the traditional districts is also pro-poor because that is where the jobs are found. Therefore, for the tourist industry to survive, which is the industry that generates the greatest number of jobs, it is indispensable to have water, and jobs are not found in those sectors that professor Nickson mentioned. Therefore, I think that the dichotomy is less categorical than what he suggested.

Carmiña Moreno

In that respect, I would like to add that the high-income levels and the tourist areas were the ones that had a water supply service, because it was an indispensable factor for the tourist activity, but the Pozón, which belongs to the poorest level, level one, was during 50 years without water. The rest of the poor neighborhoods in Cartagena were during decades without water. I ask myself, what would have happened with those sectors after 6 years, and what would the situation be like today? At present they would have no service. Today they have water and sewerage 24 hours a day.

Nola-Kate Seymoar

If I may ask a question of the panel. One of the concerns that I have, both from an environmental point of view and sustainability is the experimen-

tation with other infrastructure delivery systems. I am thinking particularly of district level or a smaller scale, neighborhood level, delivery of water, sewer systems, where the water is returned and clarified within its own neighborhood. To what extent are those kinds of ideas considered by large private sector companies in Cartagena for example. Is there resistance to low mechanization, district distribution systems or to low maintenance systems?

Luis Pinzón

The matter has been analyzed from an economic point of view and having the operation divided into sectors was more expensive than the economies of scale generated when you have a global, integral service, in which the solution may be more efficient. In the case of wastewater, which offers the possibility of reuse, depending on the type of crop, it would be very good to be able to use that kind of technology to make the system more environmentally sustainable. The problem is that wastewater production exceeds demand by far, therefore a small diversion is being made for those fields that can reuse that water.

Lye Ling Heng

May I ask a question please? I am from Singapore. I am an environmental lawyer, and I have been present at the meetings at Bangkok and Hong-Kong. I would like to ask our friends from Cartagena to clarify whether in this case the private sector is supplying facilities for both water and sewerage. In the Jakarta case, the focus there was the private sector just providing water. Would you have considered two separate companies - one for water, one for sanitation. Or is this a better option - that the company supplying the water should also take care of the sanitation?

Luis Pinzón

Well again it is a question of economies of scale. In some cases in Colombia the sewerage management system is being maintained with the public operators, and only the water supply service is being handed to the private sector. But it is a complicated matter. The most complex problem

is contamination, diseases transmitted by water, and if an operator can manage both services it is much better. Nobody is interested in paying for wastewater disposal, at least in Colombia, unless one suffers because of environmental or medical problems.

Lye Ling Heng

Yes I fully agree with you, because I think that they should be integrated because if you have problems with the water source, and it gets more and more contaminated, as the private sector, your costs will go up, treating the water. I wanted to make a point that in relation to the other cities discussed in the last seminar, the contract seemed to be quite separate. I think it is important that it should be an integrated system.

Andrew Nickson

I have a very specific question directed to Ms. Moreno. Because of the multiple regulatory entities in Colombia and given that the municipality's institutional capacity is still weak, and due to the sui generis Joint Venture arrangement of the Cartagena model, where the private operator is benefited in two different ways: as shareholder on one hand, and also by a management fee, on the other, which is the mechanism in Colombia to ensure that the private operator gets a normal rate of return and not what in English we call a «super profit»? What mechanism ensures that? because that is an issue that concerns us enormously in England, because the Oxford regulation system was greatly criticized in the 1990-1995 period, although the system was innovative. It was strongly criticized due to the super profits earned by the private companies during that period.

Carmiña Moreno

Regarding surveillance and regulating entities, there are evidently ambiguous zones between the different entities that exert the regulatory role. The new government has announced a measure that it will merge some entities. The Ministry of Development, will be merged with the Ministry for the Environment, trying to view overall water management

in a more integrated manner because there are conflicting provisions between the environmental regulation and the water supply service. And in a country with the conditions of Colombia, environmental regulation is still an issue that has to be analyzed and studied because it implies costs in the provision of the service. And if we are in the process of expanding coverage and eliminating subsidies, adding new costs like environmental costs has to be analyzed very carefully. On the other hand, there is a new law, Law 389, that states that there will be a single information system that will be operated by the Superintendence of Public Services. Because all entities used to request companies information and that also had a cost: that of surveillance and control. Therefore, as you can see steps are being taken to look for a balance between the different entities.

With regard to profitability, the rate-fixing formula includes the cost of new infrastructure replacement in the average investment cost and we have it that the income they are charging is being distributed as profits. That is a problem that worries us and on which the regulatory body will be attentive. It is a point that I agree we have to work on. ■



