

A success story

Strong social mobilisation brought Piracicaba to the frontline of water management in the country. It was the first municipality to contribute R\$ 0.01 per cubic meter of water collected for the recuperation of the hydrographical basin of the Piracicaba, Capivari and Jundiá Rivers. Sanitation has a primary role in the fight to clean up the basin, which supplies the metropolitan area of Sao Paulo with water. Piracicaba fights for its autonomy and tries to strengthen regional integration for the administration of water resources.

Four years ago, water shortages were part of the daily life of many neighbourhoods in Guarulhos. Some areas faced up to 15 days without supply, such as the Residential Bambi, which had a distribution network but no water. As the second most populated municipality in Sao Paulo, from 2001 onward, Guarulhos decided to concentrate all efforts and resources on improving water supply.

At that time public protests were making headlines in the local newspapers. In Continental Park, for instance, the recently inaugurated reservoir did not relieve water shortages. SAAE was receiving daily complaints by the press, which assumed the role of public watchdog for the precariousness of public sanitation services.

Rosilda de Moura Montarroios, 55, resident of the Continental Park 2 for about 12 years, said that in the last few years the water supply has run smoothly, but in a not too distant past the picture was very different.

She remembers that “water shortage could last for a whole week. Sometimes they would release water at night and even then just once a week. When a mobile water tanker would arrive in the neighbourhood, there was always a fight. I think there were about three or four protests per

month. I had two water tanks and I still stored water in buckets. There were houses with three tanks and people who installed tanks of five thousand litres. They were telling us that there was not enough pressure for the water to get up here. If that was so, how do we have water now? The water supply improved gradually in the last five years and with the Water Production System that was inaugurated in Cabucu, our problem was practically resolved. Today, there are no water shortages throughout the entire day. Nobody complains anymore. I even had one of my water

Guarulhos, Sao Paulo

Population estimate, 2005: 1,251,179 inhabitants / Index of urban water service: 94% (Data of 2004/ Source: SAAE) / Index of urban sewage service: 72% (Data of 2004/ Source: SAAE) / Index of waste collection and treatment: 100% (Source: City hall of Guarulhos) / Selective collection: started in 2005 in the urban area, covering five districts (Source: City Hall of Guarulhos) / Water consumption measurement index: 99.99% (Data from September 2005/ Source: SAAE) / Number of water connections: 266,336 (Data from September 2005/ Source SAAE) / Number of sewage connections: 203,258 (Data from September 2005/ Source: SAAE) / Duration of Prolonged Intermittions in Water Supply: 30,672 hours per year (Source: SNIS 2004) / Rate of analyses for the presence of coliforms outside the limit: 1.4% (Data of 2004/ Source: SAAE) / Length of water supply network: 1,967.60 km (until the end of 2004/ Source: SAAE) / Length of sewer collection network: 1,294 km (until the end of 2004/ Source: SAAE) / Average tariff charged: R\$ 1.86 per m³ / Index of invoice revenue loss: 49.93% (Data of 2005/ Source SAAE) / Productivity Index: 5.37 workers per thousand water and sewage connections (Data from September 2005/ Source: SAAE) / Gross annual operational revenue (direct and indirect): R\$ 142,935,328.68 (Data of 2004/ Source: SNIS) / Total annual cost of the service: R\$ 130,612,223.71 (Data of 2004/ Source: SNIS) / Annual utilisation cost: R\$ 119,752,781.16 (Data of 2004/ Source: SNIS) / GDP per capita: R\$ 12,063.85 (Data of 2002/ Source: IBGE) / Human Development Index: 0.798 (Data of 2004/ Source: SEADE) / Infant Mortality Rate: 17.35 per thousand live births (Data of 2004/ Source: Guarulhos City Hall).

tanks removed. I believe a good job was done since the neighbourhood grew a lot, and even so, there is no more water shortage”.

The chaotic picture made the recently elected government adopt emergency measures. Such action initially took place in the areas of Bonsucesso, Pimentas and Continental Park. The objective was to organise a water supply rotation system in these areas and thus, minimize the problem by improving the supply to the population, since a definitive solution would only come from medium and long-term actions. One of the emergency actions was the internal reorganisation of SAAE in order to improve services. Another was the elaboration of a Master Plan for the Water Supply System, (PDSA) and the Sanitary Sewage System (PDSE).

After almost five years, the water supply scenario in Guarulhos is very different, despite the municipality's low water availability since it is situated in a high altitude marginal area of the hydrographical basin. It is worth mentioning that SAAE of Guarulhos buys, in bulk quantities, around 90% of the water distributed, from the Basic Sanitation Company of the State of Sao Paulo (SABESP).

Even so, SAAE either reduced the intermittent periods and established a fixed rotation system of water supply, or normalized the supply completely. Some works were important in changing this situation. The drilling of deep wells, the inauguration of the Water Production System of Cabucu, which is responsible for the stabilization of water supply in the Continental Park, the extension of the distribution network, the installation of boosters and the construction of central reservoirs in the Sao Joao Garden and in Cabucu are worth mentioning.

Approximately 94% of the population of Guarulhos receives drinking water through the network. From January 2001 to September 2005, around 188.5 kilometres of the network and 49,495 water connections were installed.

For sanitation engineer Joao Roberto Rocha Moraes, Superintendent of SAAE of Guarulhos, municipal autonomy is fundamental for progress in public administration since “it allows the municipality to design its development in a totally independent manner, which is not possible in the case of a state company, where, as a general rule, the priority is always an issue of the greater region rather than the micro-regions or the municipalities. For instance, the Master Plan of SABESP is not focussing only on the municipality of Guarulhos; it has a more general vision, which is not necessarily in the interest of only the municipality. Actually, for SABESP, it might not even be interesting to invest in the area of the Industrial Satellite City of Cumbica while it is a governmental priority to develop that area. With autonomous administration we gained agility; all revenues stayed in the municipality. Furthermore, the higher social sensitivity of the autonomous administration, permits investments in deprived areas which do not generate the expected returns that the state company usually expects,” he affirms.

Big demand for sewage service

Although the demand for the installation of a sanitary sewage collection network is still high in Guarulhos, the situation has improved in recent years. From January 2001 to September 2005, around 141.5 kilometres of sewage network and 22,372 sewage connections were installed.

In places where the conventional system is not viable because of the landscape, SAAE installed condominiumal sewage systems.

SAAE is seeking around R\$ 2,262,558.75 from the federal government in order to perform extension works of the collection network and sanitary sewage connections in five neighbourhoods. More than 6,000 people will benefit from these works.

Water sufficiency and quality

In February 2004, SAAE started operating a laboratory of physico-chemical and microbiological analyses in order to reduce costs and demonstrate higher agility in the control of the water supply system. Even though SAAE already performed analyses at the Water Treatment Plants (ETAs) of Tanque Grande and Cabucu, the majority of this work was carried out in private laboratories. Today, only the most complex and rare analyses are performed by private companies.

In order to guarantee water quality, all the production and distribution process is monitored. Everyday, around 60 physico-chemical and microbiologic analyses are carried out. The laboratory analyses comply with Decree no 518/ 2004, of the Ministry of Health which defines the Control and Fiscalisation of the

Quality of Human Consumption Water and its Potability Pattern. In compliance with Decree no 5.440/2005, of the Presidency of the Republic, SAAE makes all information regarding the results of the analyses available to the public.

Works of water supply in the areas Cocaia, Bonsucesso and Cumbica, are still pending. The biggest part of the necessary resources will come from the Union's General Budget (OGU) through the National Health Foundation (FUNASA), which will finance around R\$ 6 million. The City Hall of Guarulhos will participate with a counterpart funding of R\$ 2.6 million. The Autonomous Service will carry out the works, including the installation of primary networks and boosters. Approximately 435,000 inhabitants from eleven neighbourhoods will benefit from the works. The presented proposal was selected by the Programme of Environmental Sanitation in Metropolitan Areas (PSARM) developed by the Ministry of the Health/FUNASA in partnership with the Ministry of Cities/National Secretary of Environmental Sanitation.

Recovering Citizenship

With the creation of a specific body, the Division of Sanitation in Slums (DISF) of the Autonomous Service's Department of Planning and Projects, SAAE improved quality of life in those areas. SAAE introduced water supply and sanitary sewage collection services, either by creating collective networks in residential complexes or linking individual premises to the conventional system. Several residential areas dispersed through the city were and are benefiting from this system. It is worth mentioning that the municipality of Guarulhos includes 410 slums, with 44,871 families.

In these areas, besides infrastructure works, SAAE carries out extensive social-educational activities, increasing the community's awareness on issues related to environmental education, rational use of water, as well as to the benefits of the installation of water supply and sanitary sewage collection systems. The activities aim to encourage popular participation with the Public Authority and strengthen citizenship.

Energy efficiency

Having presented the best project, among other municipalities, on rational use of water and energy in the Southeast Region, SAAE of Guarulhos was one of the operators selected by the National Programme of Electricity Conservation –(PROCEL) of Eletrobras, which is linked to the Ministry of Minerals and Energy.

The agreement, developed in partnership with the Ministry of Cities, through the National Secretary of Environmental Sanitation, was signed in June 2004. SAAE will receive R\$ 700,000 and, as counterpart funding, will invest around R\$ 900,000 to implement the selected project. The proposal of the Autonomous Service, based on the Master Plan of the Water Supply System of Guarulhos –(PDSA), establishes a low area for water supply. After its complete implementation, the project will achieve energy and water conservation, since some neighbourhoods that are currently supplied by water pumping will start being supplied by gravity related flows of water. Around 10,561 metres of network will be constructed.

The Superintendent of SAAE in Guarulhos explains, “the association of sanitation policies with other public policies is one of the strong points of the autonomous service. In Guarulhos, the actions were very promising since they brought together several organisations. For example, when flooding problems seemed impossible to solve, the following bodies of city hall worked together: Secretary of Works, National Guard, SAAE, and Proguaru, a joint stock company with public majority. These bodies acted together, cleaned and desilted streams allowing the city to pass practically unharmed through the flooding period, compared to what regularly happens in the metropolitan area. This was only possible because the attention of bodies such as SAAE was focused on the actions of the municipal administration. This is the big advantage when you work autonomously”.

An example of joint policies is the partnership between the Secretary of Housing and SAAE, which has been in place since June 2004, in order to extend a project of integrated urbanisation of slums. The projects of urbanisation, architecture and engineering ended in September 2005. The process is currently in the finalisation phase of the Resettlement Plan. The work is financed by the Technical Assistance Project of the Programme of Basic Sanitation for Low Income Populations (PAT-PROSANEAR), of the Ministry of Cities, with resources from the International Bank for Reconstruction and Development (IBRD). The contract with the Federal Bank Caixa Economica was signed in 2003. According to the contract, the Ministry of Cities provides around R\$ 800,000 to the City Hall of Guarulhos to extend the Local Integrated Development Plan, the Integrated Sanitation Project (PSI) and the Social Work Programme. These three actions are part of the PAT- PROSANEAR Programme.

Raising awareness promoting change

In 2001, SAAE-Guarulhos launched the Environmental Education Programme (PEA) under the title “Guarulhos: Environmental Sanitation and Quality of Life”. PEA was jointly developed by the Municipal Secretaries of Education, Health and Urban Development, the Education Superintendence of North Guarulhos, the Private Education network, the Brazilian Airport Infrastructure Company (INFRAERO) and the National Institute of Space Research (INPE). PEA involves students and teachers in a socio-environmental study of the city, in relation to water resources. In 2004, 136 schools and around 100,000 students participated directly and indirectly in the programme.

In 2005, in observance with the agreement between SAAE and the National Health Foundation (FUNASA), the programme incorporated a new proposal, building the Programme of Health Education and Social Mobilisation (PESMS). The objective is to promote, through permanent actions of environmental and health education, the participation and organisation of the communities of Cocaia, Cumbica and Bonsucesso areas, where water supply works are taking place, with resources from the federal government.

Plan for fair and efficient water distribution system

SAAE buys around 90% of the water distributed in the municipality in bulk quantities from the Basic Sanitation Company of the State of Sao Paulo (SABESP). Locally, there is no alternative for water supply in sufficient quantity requiring a long-term plan of action on the issue. Therefore, in 2002, the Master Plan for the Water Supply System (PDSA) was adopted.

The objective is to promote a more fair and efficient water distribution system, recovering from decades of investment shortage.

During the development of the studies, the general conditions of water supply were analysed and the main deficiencies pointed out, as were all the growth patterns of the population, so that the system could be oriented to assist the development of the municipality. With that objective, the study, which terminated in 2003, determined the

necessary interventions such as installation of primary networks, minor and major pipelines, construction of reservoirs, definition of supply sectors, elevation stations and boosters, prioritising works and investments until 2025.

Some works were classified as urgent. Primary networks approved in 2003 were among the ones that should be immediately installed, in agreement with PDSA. These interventions contributed to the improvement of water supply in various places where the works took place.

Public Services are modernised

With the creation of the Department of Social Communication (DCS) improvements in communication with the consumers were achieved through the modernisation of the 0800 hotline service, cited in a visible place, with modern equipment, revision of the service codes and the definition of new deadlines for the completion of requested services. The hotline receives 800 to 900 calls per day, including service requests and information.

Furthermore, in February 2004, the Audible Answer Unit (URA) was installed. This system is similar to call centres where the users themselves access the required service, selecting the respective number.

Another great benefit for the population was the decentralisation of the service in August 2002, with the inauguration of eight Easy-Service Centres for the citizen. Before that, the service to the public was taking place in two units in the same building as central administration. The change was soon felt by the user. The endless lines were replaced with an organised structure, including electronic password and more attendants.

All these actions significantly improved the relationship with the user that previously sought the press to request services or complain, rather than interacting with SAAE directly.

At the same time, SAAE decentralised the maintenance services of water and sewer connections in four operation centres. Until 2001, only one unit was actually conducting technical and operational services.

Developing Human Resources

At the end of 2001, already with a new organisational structure, SAAE developed the Division of Human Resources Development, composed of the following departments: Recruitment, Selection and Training (SERET);

As Marcelo Bonilha Campos, attendant of the Easy-Service Centre in public attendance since he joined SAAE, states "With the creation of the Easy-Service Centres the population is better served and the majority of the problems are solved by just one attendant. This was a good development for the attendants too, since today, in my opinion, we have more dignity".

SAAE and the consumer

Since January 2001, SAAE concentrates all its effort on re-gaining its credibility, which was lost due to the decades long lack of investments in water supply and sanitary sewage systems, as well as in reforming its own internal structure. The creation of the Departments of Community Relationship and Social Communication (DRC) and (DCS), respectively, was an important move for the recovery of the Autonomous Service's identity. The most positive result was that the city sees SAAE as public property.

Since 2002, SAAE implements the Quality Administration System, seeking to fulfil the requirements of the ISO 9001-2000 certification. The main objective is to adapt SAAE's activities to the quality standards of the best sanitation service providers in the country. The Administrative and Quality Evaluation Procedures are already concluded. Following that, Internal Auditors will be trained and qualified with the Autonomous Service's own resources and will assess the current processes in the system, preparing the Autonomous Service for the certification procedure.

Social Welfare (SEASO); and Work Safety (SESET). The creation of these departments advanced considerable issues related to human resources.

The Programme of Professional Qualification offered 4,562 opportunities to employees for courses, trainings, lectures, seminars and congresses from January 2001 to October 2005. One of the important actions in 2001, in the areas of Work Safety and Accidents Prevention, was the training of a drainage maintenance team that works inside the ditch network. The creation of the Drug Addiction Support Group, coordinated by SEASO, should also be highlighted. The group's aim is to reintegrate and assist employees and their families.

The plan indicates alternatives for sewage

The demand to extend the sanitary sewage collection network is high. The municipality of Guarulhos does not yet treat sewage. Aiming to find the best way to avoid polluting waterways, in November 2003, SAAE negotiated the Master Plan of the Sanitary Sewage System (PDSE), which was completed in 2004, and is now in the final planning phase. PDSE indicated the best alternatives and the necessary resources for the collection, removal and treatment of the sanitary sewage generated in the municipality.

Conference guarantees popular participation

In December 2001, SAAE, through the Community Relationships Department (DRC) and the City Hall of Guarulhos, with the collaboration of various municipal secretaries, advanced significantly in the process to recover the credibility of the Autonomous Service to the public, by carrying out the 1st Municipal Conference on Environmental Sanitation. The event was the conclusion of a 30-day workshop involving more than a thousand people.

The conference brought together community leaders from all areas of Guarulhos, the local reality was presented, and guidelines were defined regarding works and services in the areas of water supply, sanitary sewage, solid waste, waste recycling, health monitoring, rainwater drainage and forestation. Given the opportunity, the mechanisms guaranteeing popular participation in decision-making were also defined.