

Meeting the challenges with external technical assistance

The Autonomous Service of Water and Sewage (SAAE) of Passos was created by the Public Health Special Service Foundation (FSESP) using the most adequate administration patterns and sanitation technologies. The municipality was the first in Brazil to fluoridate water for public consumption using fluorine produced nationally, leading to the reduction of the dental decay index. SAAE, which has a 90% approval rate among consumers, is currently investing in the construction of the new Water Treatment Plant in the Grande River and a Sewage Treatment Plant. The users' approval for the services was recently surveyed: around 80% of the population considers the water tariffs applied by the Autonomous Service as "realistic or very low".

Passos, which is considered the capital of Southwest Minas Gerais and lies on the right bank of the Grande River, is the central point of the Nacentes das Gerais tourist route. Besides being a political and administrative centre for hosting state and federal organisations, Passos is a reference in education, since it hosts the main campus of FESP/UEMG and various other technical courses that attract thousands of students.

In the last decade, the municipality's per capita income increased while the inequality index (Gini Index) reduced. Passos was classified by UNPD as a medium human development municipality.

The sanitation services contributed significantly to the increase in the quality of city life. At the end of the 90s, a survey on infant mortality rates carried out by SAAE in the city's registry office, showed that since the beginning of the 80s, there were no registered deaths due to Diseases Related to Inadequate Environmental Sanitation (DRSAI). In this study, infant mortality was strongly linked to respiratory system disease.

Passos, at the beginning of the 80s, achieved universal water supply in the urban area. There are underground water distribution networks alongside all streets. There are no rural communities in the municipality. There are just some rural properties that were recently incorporated into the urban area, which do not possess sewage collection system. The water supply index is 98.6%.

Until the 50s, Passos was supplied by the spring of the Sabao Stream. A precarious system of concrete channels was carrying raw water to the city. The spring, besides being polluted, had insufficient flow for the city's water demands. At that time, the Municipal City Hall entered into contract with FSESP, a department of the Ministry of Health, to develop and administer the city's water supply system.

Passos, Minas Gerais

Population estimate, 2005: 105,098 / Urban population: 89,911 / Number of water connections: 28,944 / Number of active water connections: 26,918 / Number of sewage connections: 28,470 / Number of active sewage connections: 26,512 / Total cost of the service per m3 invoiced: R\$ 0.30 / Average tariff charged: R\$ 0.40 per m3 / Invoice revenue loss index: 11.5% / Productivity Index: 1.6 workers per thousand water and sewer connections / Gross annual operational revenue (direct and indirect): R\$ 6,124,382.51 / Annual utilisation cost: R\$ 4,302,349.24 / Average duration of repairs for sewage leakages: 3 hours / Coliforms out of the limit: 0.9% /

Source: SNIS 2003, IBGE 2000, SAAE Passos

In September 1959, the construction of the Bocaina Stream water collection station begun. The municipality's supply system started taking shape with the simultaneous construction of a water reservoir with 1 million litres capacity that was completed in 1960.

At that time, only 30% of Passos' population (around 8,500 inhabitants) were covered by the public water supply system, while the sanitary sewage system covered only 25% of the population (around 7,000 inhabitants).

The central administration of the sanitation service was established in November 1960, when Law 439 created the Autonomous Service of Water and Sewage (SAAE).

One year later, the first agreement for the administration and operation of SAAE was signed between the Municipality's City Hall and FSESP. The Foundation and city hall were committed to collaboration in fundraising for the construction of the water treatment plant, since the population continued being supplied with non treated water.

Administrative continuity

The National Health Foundation (FUNASA), which took over the actions of FSESP in 1991, unilaterally called off the administration agreement at the end of 1998. During the three municipal administrations that followed the end of the agreement, the management of the Autonomous Service was executed by SAAE's employees. These technicians were trained inside SAAE, a fact that guaranteed administrative continuity and organised action planning for the medium and long-term.

Even after the end of the agreement, an engineer of FUNASA continued working in the municipality and advising SAAE, contributing to the strengthening of the service.

Self-financing is approved by the population

In July 2005, SAAE carried out a survey to find out the upper limit of the water and sewage tariffs that the population could afford paying. The survey revealed that the users were disposed to contribute to the strengthening of the Autonomous Service.

The research showed that the population is willing to support a strategy of recuperation for the investment capacity of the service through gradual and long-term tariffs readjustments, but rejects a larger readjustment at a single time. About 77% of the survey participants considered the price of water reasonable or "very low".

The participants consider SAAE as a serious and reliable public institution. Most of the participants stated they had reasonable knowledge of the projects initial phases, such as the construction of the new Water Treatment Plant of the Grande River and the construction of the Sewage Treatment Plant.

Ninety percent of the population gave SAAE's performance a positive evaluation.. Their confidence with the Autonomous Service was 95%. On a scale from zero to ten, 88% of the population gave SAAE a ranking of 7 or higher.

Pioneer in water fluoridation

One of the major achievements of SAAE was the implementation of the Water Fluoride Project in 1965. At that time, only a few municipalities in Bahia and Espirito Santo were treating water for public consumption with Sodium Silico-Fluoride.

The product was imported and expensive. 'Fluorita', a fluorine composite was produced in Brazil and produced the same efficiency at a lower cost. Passo was the first place in Brazil where this was implemented.

The results of that pioneering action were indisputable. In 1978, the municipality registered a 72% drop in tooth decay symptoms in children between 7 and 14 years and in 1985, a new drop, this time of 58.42%, in the same age group.

Over the last few years, SAAE oversaw all orders establishing water quality patterns (currently Order 518/2004 of the Ministry of Health), and also observed Decree no 5.440/2005, which obliges the service provider to make available to the consumer information on the quality of the water. The first annual report of 2004 has already been distributed to the population.

Heavy investments guarantee the expansion of the services

SAAE practices its tariff policy using social consideration. The minimum tariff, corresponding to the consumption of 15 m³ is currently R\$12.78.

The price of the cubic meter of water is progressive and the users consuming more are subsidising the ones consuming less. SAAE has also introduced a special social tariff for families consuming up to 10 m³ of water and possessing a residence of up to 50 m². For that part of the population, the minimum tariff is R\$ 8.53, which includes water supply and sanitary sewage services.

Having followed this policy for the last few years, the tariffs were readjusted every year, a fact that guaranteed the ability of the Autonomous Service to invest. The tariff readjustments are based on studies conducted by SAAE and need to be authorised by the mayor. The medium and long-term planning, designed by SAAE, is also submitted to the mayor and the city council for approval.

The index of failure to pay off bills is low and has stabilised around 2.3% during the last six years. The two projects currently under construction, the sewage treatment plant and water collection and treatment station, will attend to the needs of Passos until 2020, were shared with the population at two public hearings. In 2005, the projection for resource availability for investments was around 58% of the total revenues. In the last ten years R\$ 8,514,348.93 from tariff revenues were invested.

At the beginning of the 70s, the Inter-American Development Bank (IDB) financed US\$ 200,000 for the construction of water distribution rings and for the installation of hydrometers.

The SAAE received non-onerous resources from the SESP Foundation, to be invested in the construction and expansion of water supply and sanitary sewage systems. Currently, SAAE has requested the financing of R\$ 17,983,700.29 from the Federal Savings Bank in Caixa for the construction of interceptors, emissaries and a sewage treatment plant, and for the installation of a new water collection and treatment system.

Operational indicators

The Autonomous Service's administration has been trying to reach the operational indicators defined by the National Sanitation Information System (SNIS) regarding management and quality, aiming to create the conditions for the improvement of the services.

Over the years, SAAE developed a relationship of mutual respect with its 75 employees. This allowed the achievement of high productivity indexes in water and sewage services. Each employee is completely aware of the Autonomous Service's role in the public administration of Passos.

Currently the productivity index of the Autonomous Service is 707 water and sewage connections per worker, which demonstrates a significant commitment of the employees to the institution.

The investment fund is the result of the debate with the population and subject to social control

In April 2002, the Special Fund for Investments in Sanitation (FISAN) was created by Law n° 2.286. The objective of the Fund is to assist in the construction of the sewage treatment system and the second water collection and treatment system.

The resources allocated by the Fund are accompanied and monitored by a Monitoring Council, COFISCAN, composed of members from the Public Authority and civil society. The Council meets every month at the premises of SAAE and their activities are not remunerated since this is considered a public service.

The creation of FISAN led to a 27% increase in water and sewage tariffs. Two public hearings, one promoted by the city hall and SAAE and the other by the Municipal Council, led to the institution of the Fund. The population participated in the debate regarding the objectives of the Fund, the importance of these projects for the municipality, their benefits and the origin of the necessary resources for their implementation. This debate with the population and the councillors led to the unanimous approval of the bill by city hall.

The Public Ministry also supported the foundation of FISAN, as an instrument for the implementation of projects with its own resources. Later on, the resources were used as matching funds for a financing proposal presented to the Federal Savings Bank of Caixa (CEF).

SAAE participates in the Health Council (CISMIP) and of Council of Environmental Defence (CODEMA). Despite the lack of special technical chambers, the sanitation policies developed by the municipality are regularly discussed and evaluated at these councils.

In Passos, sanitation projects always have their place guaranteed on the agenda of the municipal conferences about health. SAAE also participated actively in the two regional Conferences of the Cities that took place in Passos.

Advanced action planning with social participation

The Master Plan of Urban Development for Passos, which was developed in 1995, is currently undergoing re-evaluation and updating. The Water Supply Master Plan, which was created in 1980, is also reviewed and updated periodically. The latter served as a basis for the elaboration of the projects regarding the new water collection station in the Grande River.

With the construction of the new water collection and treatment station in the Grande River, SAAE will guarantee demand coverage until 2020. The Water Supply Master Plan detected that at the end of the drought period, conflicts started appearing in the hydrographical basin of the Bocaina Stream due to the reduction of the water flow from the spring. In order to guarantee public water supply, SAAE is investing in a new collection station, thus reducing its dependence from the Bocaina Stream.

In 1996, the Master Plan of the Sanitary Sewage System was developed, which resulted in the sewage treatment complex (interceptors, elevators, emissary and Sanitary Sewage Plant) construction project. It is currently at the preliminary construction stage, with resources from CEF. The project was discussed during the two public hearings that took place addressing the constitution of FISAN.

The protection of the hydrographical basin is compulsory in the Municipality

The protection of the main source of water of Passos, the Bocaina Stream, is now demanded by law. Ninety-five percent of its hydrographical basin lies in the municipality's area. In October 1995, the City Council approved Municipal Law n^o 1,987, which addresses the preservation of the basin.

The Committee for the Preservation and Recuperation of the Bocaina Stream Hydrographical Basin has already the construction of about 500 septic cesspits and drains, 48 residential sanitary units, a central reception point of empty pesticide containers and hosted meetings and seminars on environmental education in order to increase the community's awareness on the importance of the basin.

Together with EMATER, the municipality developed the master plan for the administration of the basin, which conducted a diagnostic on its situation and planned actions for the recuperation of degraded areas and the integral protection of the environment.

Some of the entities that participated in the committee were: the Municipal City Hall through the Municipal Secretary of Agriculture, Livestock and Provisioning, SAAE, CODEMA, EMATER, IEF, Forest Police, IMA, Rural Union and the Neighbourhoods Association.

The Autonomous Service participates in events related to environmental education that are promoted throughout the municipality and systematically receives students in the Water Treatment Plant that assist in seminars related to water resources and the environment in general.

SAAE is part of the Committee of the Sub-Basin of the Middle Grande River.

Rural sanitation

Besides the programme for the recuperation and protection of the hydrographical basin of the Bocaina Stream, SAAE promoted the construction of septic cesspits coupled with absorption cesspits, residential sanitary units for the rural population and a sewage treatment plant in the centre of the Areias community, that is capable of assisting 250 people.

The residents of the rural areas started relying on two reception centres for toxic waste, domestic rubbish bins and projects on environmental education of the local families.