The sanitary and environmental situation of Minas Gerais, the second most populated state in Brazil, is similar to the rest of the country where over 90% of Brazilian cities lack systems for the treatment or final disposal of urban waste and sanitary sewage.

In an effort to minimise the problem, the State Government of Minas Gerais passed a law to distribute part of the state tax/ICMS to areas such as health, education, sanitation and environment.

Two requirements for the transfer of resources to the municipalities have been defined according to the environmental criterion:
1. Environmental sanitation - urban waste or sanitary sewage treatment or disposal systems with operations duly licensed by the state environmental office, that benefit the minimum of 70% and 50%, respectively, of the urban population;
2. Conservation areas - legal existence of an environmental conservation area with defined boundaries and restrictions to the use of the land.

Until 1996, none of the municipalities in Minas Gerais had an environmental license for sanitation systems. In December 2001, 39 municipals had already received the benefits of the Environmental State Tax/ICMS.

It is believed that the increased demand that started in 1996, clearly indicated the legislation as an efficient economic mechanism for enhancing the prioritisation of the implementation of sanitation systems.

Categories: Social Services:
- health and welfare
- public safety

Environmental Management:
- ecological sustainability
- environmental health
- environmental remediation
- monitoring and control
- pollution reduction

Infrastructure, Communications, Transportation:
- sanitation
- waste-management and treatment

Level of Activity: Regional (international)
Ecosystem: Tropical/Sub-Tropical
works by municipal authorities, thus contributing to the improvement of the quality of life of the population.

It is important to point out that this experience has received the attention of administrators from other Brazilian states, which are in the process of putting forward similar laws.

Narrative

SITUATION BEFORE THE INITIATIVE BEGAN

The problem of solid waste management and sanitary sewage disposal in Minas Gerais was critical as it was in the rest of the country, where over 90% of the cities disposed their urban solid waste in dumping sites and had no sewer systems. This contributed to the worsening of the sanitary and environmental conditions in term of an increase in water and atmospheric pollution and soil contamination. However, the dumpsites were the most frequented spots for street children who live on what they can scavenge from the dumping sites.

ESTABLISHMENT OF PRIORITIES

In the last three decades, the State of Minas Gerais experienced an accelerated process of urbanisation. In 1970, 53% of its inhabitants lived in the cities while in 1996 this percentage rose up to 76%. This intense process of urbanisation was not followed by the expansion in housing estates or by the implementation of basic infrastructure such as treated water, sewage systems, solid waste disposal, etc. The result was that a good number of poverty-stricken people started to move to the big Brazilian urban centres. Overpopulation in the cities brought about environmental degradation and the deterioration in the quality of life.

As a means of minimising the effects of this situation and enhancing actions geared towards environmental preservation, the State Government of Minas Gerais passed the law. The Law integrates into society, an income redistribution project, increasing the participation of the needy municipalities by the distribution of 25% share of the tax on the circulation of goods and inter-state and inter-localities transport and communication services (State Tax/ICMS).

FORMULATION OF OBJECTIVES AND STRATEGIES

The State Tax/ICMS is distributed on different criteria. The ecological criteria aims at:
1. Promoting sustainable development by transferring the resources from part of the State Tax/ICMS to municipalities that give priority to environmental conservation and the treatment and final disposal of urban waste and sanitary sewage;
2. Adding value to the implementation and operation of environmental sanitation systems through the Environmental Operation License;
3. Adding value to the creation and maintenance of areas of environmental conservation through state records and the application of the Quality Factor in the analysis of the transfer indexes of the State Tax/ICMS;
4. Offering financial compensation to municipalities that are involved in environmental conservation such as those that have Parks, Biological Reservations, Indigenous Areas and Environmental Protection Areas.

MOBILISATION OF RESOURCES

For the transfer of the Ecological State Tax/ICMS, the following criteria were defined:
- Environmental sanitation: treatment and final disposal of solid waste and sanitary sewage;
- Implementation of conservation areas.

The financial resources that are transferred to the municipalities come from the collection of the State
Tax/ICMS. The share allocated to the municipalities in compliance with the environmental criterion was 0.3% (US$ 4,484,088.00) in 1996; 0.6% (US$ 8,393,177.00) in 1997 and 1% (US$ 9,767,987.00) starting from 1998.

PROCESS

Until 1995, the transfer of these resources was done on the basis of economic factors, population and mineral production. Within 723 municipalities in Minas Gerais in 1995, only 10 (1.4%) received 50% of the total income. On the other hand, 10% of the resources were allocated to 610 (84%) municipalities, according to these criteria.

In 1996, under the Law no. 12.040/95 - which was later on revoked and replaced with Law no.13.803 on 27th December 2000 - the distribution of the resources on the grounds of state Tax/ICMS started being done on social grounds such as health, education, cultural heritage, sanitation and environment. The transfer of a minimum quota was also foreseen, in order to allow the needy municipalities to meet their minimum administration costs.

To apply for the Ecological State Tax/ICMS through the sub criterion of environmental sanitation, the municipality will have to have a licensed system from COPAM - the State Council for Environmental Policy for the final disposal of urban waste benefitting at least 70% of the urban population, or a sanitary sewage works covering at least 50% of the urban population. Up to three months after the Operation License has been granted, the municipalities are then able to start receiving benefits from the Ecological State Tax/ICMS.

The share to be transferred to the municipalities registered within each sanitation plant is up to 50% of the total resources to be transferred through the Environmental Criterion. The Law states that the maximum annual value to be allotted to the municipality shall not exceed the amount invested in the implementation of the sanitary sewage works or the final waste disposal system, which is based on the population benefited.

As for the sub-criterion for conservation areas, the aim of the government is to offer compensation to the municipalities that have environmental preservation areas in their territories. Federal and state areas are taken into account as well as local areas, as long as they are duly registered with the IEF -The State Forestry Institute and approved by COPAM. In order to apply, the municipalities are required to present legal documents that prove the existence of the environmental conservation area, its boundaries and restrictions to the use of the land.

Within this criterion, the transfer of Ecological State Tax/ICMS takes into account the percentage of the area occupied by the conservation unit, the degree of restrictions to the use of the land and the state of conservation of the area. The share of Ecological State Tax/ICMS is higher for those areas that suffer the most restrictions, in line with protection needs.

RESULTS ACHIEVED

Motivated by the Ecological State Tax/ICMS, pressured by the prosecuting council, by Non-Governmental Organisations and by the society in general, and also due to the increased awareness by the public administrators of how much damage inadequate waste and sewage management have caused, the municipalities started a great demand for the licensing of final disposal of its domestic solid wastes and sanitary sewage.

It is considered that the increased demand for licensing since 1996, indicates that the economic mechanism has helped in making the municipal authorities prioritise the implementation of sanitation systems.

None of the municipalities qualified for the environmental sanitation sub-criterion in its first year-1996. The municipality of Betim, which has a population of 250,000 inhabitants, was the first one to
qualify for its sanitation system (landfill and composting plant) in 1997. It started operating in September of that same year, having received resources from the Ecological State Tax/ICMS totalling US$ 1,795,332 in one year. This means that the investment made in the implementation of those systems was recovered over the period of one year. The municipality continues to receive annually the Ecological State Tax/ICMS quota permitting the improvement of the disposal plant.

In December 2001, 39 municipalities in the State of Minas Gerais received their share of the Ecological State Tax/ICMS, sub-criterion Environmental Sanitation. 30 of these municipalities were in possession of their environmental operation license for final waste disposal and 9 for sewage treatment systems. This benefited a population of 3,849,251, which corresponded to approximately 20% of the urban population of the State. Around 85 municipalities were in the process of obtaining their licenses for sanitation systems.

SUSTAINABILITY

The awareness brought about by this Law concerning waste and sanitary sewage systems contributed to change in the behaviour of municipal leaders who started considering questions related to the environment and sanitation. They also put these as priorities in their work.

It has been noted that waste disposal systems are in great demand, especially in small municipalities. This is because the costs are relatively minimal compared to those for the implementation of sewage treatment systems.

An integrating part in the design of the treatment and final disposal systems for solid waste is the implementation of actions that aim at absorbing the population that survives on scavenging the waste in dumping sites. The municipalities have been implementing programs that generate wages for this part of the population by encouraging the creation of co-operatives or associations that guarantee a work market. They also promote social inclusion programs for a significant part of the population that can be found at the perimeter of urban centres and who are marginalised.

It is important to point out that for the final waste disposal systems the environmental license is conditioned to the recovery of the area degraded by the dumping site, which is an environmental liability for the municipality.

LESSONS LEARNED

After 6 years, since the Law was enforced there have been some considerations over the need to alter some transfer criteria to the values allotted to each municipality.

In case the operation license is removed, it is fundamental to have the immediate cancellation of the municipal from the Ecological State Tax/ICMS record, which would interrupt the transfer of resources that does not occur at present.

It is worth highlighting the importance of the proposed inclusion of a "Quality Factor" in the resource transfer criteria for sanitation works. This factor should evaluate the compliance of the conditions established when the Operation Licence was granted for the work, as well as the operating conditions of the plant, having in view the significant differences found in different municipalities in the maintenance of these systems.

In addition, it is also important to modify the period of time the municipalities are in the system so that they are excluded after some time and others can be have a chance to be in the system.

Finally, it is considered very important to increase the index currently allocated to this incentive which aims at ensuring that the municipalities, especially medium-sized ones with up to 20 thousand inhabitants, get a return for their investment.
TRANSFERABILITY

Minas Gerais is the first state in the country to offer incentives for investment in treatment and disposal of waste and sewage. Before Minas Gerais, the state of Parana sanctioned a Law that encouraged the creation of environmental conservation areas, it served to inspire the authorities of Minas Gerais for the elaboration of the Ecological State Tax/ICMS Law. The difference from one proposal to the other is that Minas Gerais also introduced the environmental sanitation criteria as well as the creation of conservation areas.

The Ecological State Tax/ICMS has drawn the attention of administrators from other states in Brazil, who are in the process of putting forward and passing similar laws in order to motivate their municipalities to implant and preserve their sanitation systems and environmental conservation areas.

The State of Pernambuco passed a law in December 2000, which was inspired by the Law from Minas Gerais, and gave 5% of the State Tax/ICMS value to those municipalities that implemented solid waste treatment and final disposal systems. In this case, sanitary sewage treatment systems were not included and the value to be distributed to the municipalities by the criterion of the environmental conservation areas is 1%.

The state of Santa Catarina found itself in the discussion process of a similar law and has been maintaining a parallel contact together with institutions from Minas Gerais with the aim of learning from the experiences of this state for the elaboration of its environmental law.

In conclusion we can confirm that the positive results from the municipalities prove that Minas Gerais State was right in implementing the use of an economically induced tool. Certainly, the actions resulting from this Law have improved the environmental and sanitary conditions of the state and, consequently, the quality of life of the people. This Law has as well promoted environmental awareness on the part of public administrators and political decision-makers.

Key Dates

December / 1995: the government sanctions Law no. 12.040/95
September / 1997: the first municipality (Betim) starts to receive the financial incentive
December / 2000: Law no. 13.803/00 is replaced
December / 2001: 39 municipalities in the State of Minas Gerais are able to receive their share of the Environmental State Tax/ICMS

Contact

Ludmila Alves Rodrigues
Fundacao Estadual do Meio Ambiente - FEAM
Avenida Prudente de Morais 1671
Belo Horizonte, Minas Gerais - Brazil
30380-000

Tel: (55) 021 31 3298-6452
Fax: (55) 021 31 3298-6296
E-mail: sandramf@feam.br, Ludmilar@feam.br

Type of Organization: Foundation
Partners

Secretaria de Estado de Meio Ambiente e Desenvolvimento Sustentável â€“ SEMAD
Luciana Felício Pereira
Secretaria de Estado de Meio Ambiente e Desenvolvimento Sustentável - SEMAD
Avenida Prudente de Morais 1671
Belo Horizonte, Minas Gerais - Brazil
30380-000

Tel: (55) 021 31 3298-6346
Fax: (55) 021 31 3298-6323
E-mail: gabinete@semad.mg.gov.br
Type of Organization: Central Government
Type of Partner Support: Technical Support

Conselho Estadual de Política Ambiental - COPAM
1671 Avenida Prudente de Morais,
Belo Horizonte, Minas Gerais, CEP: 30380-000, Brazil

Type of Partner Support: Technical Support

Instituto Estadual de Florestas â€“ IEF
Rua Paracatu, 304
Belo Horizonte, Minas Gerais - Brazil
30180-090

Telephone: (55) 021 31 3330-7001
Fax: (55) 021 31 3330 -7004
E-mail: ief@ief.br
Type of Organization: Central Government
Type of Partner Support: Technical Support

Financial Profile

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<th>Year</th>
<th>Total Budget (US$)</th>
<th>Percentage transfer from State Tax /ICMS</th>
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State Tax/ICMS: collected from operations relative to the circulation of goods and inter-state and inter-municipalities transport and communication services.