

## Annex

### **A Case of a Positive Policy Environment for Modernization and Regionalization of Waste Management - Slovakia**

#### **The Synergy of Economic Incentives and Command-and-Control Measures**

During the decade following the transition in 1989/90, Slovakia (and the neighboring Czech Republic with which it was united at the time when the policies in question were adopted) has been more successful than other ex-socialist countries in attracting investment for the modernization of municipal solid waste management (MSWM) than other ex-socialist economies. Both private strategic investors and municipalities invested heavily in the sector.

Slovakia's encouragement of investment in MSWM modernization did not mean a laissez faire "hands off" posture of government, for positive price incentives were combined with strong regulatory measures to close old landfills. It was the combination of price incentives and command/control regulations that succeeded to bring about a great many investments in modern landfills, to the point where Slovakia substantially met European Union standards waste disposal in modern landfills. In the process, MSWM services have also been largely regionalized, which is one of the hallmarks of cost-effective MSWM. All this has been achieved with the vital participation of private companies, and without budgetary grants.

#### **The Policy**

In the early 90s, Slovakia introduced an innovative policies aiming mainly at the replacement of some 5000 local landfills and unregulated dumps by modern regional landfills. The consequent legislation adopted a two pronged approach

1. regulations to close most the dumps by means of administrative decrees
2. financial incentives for the upgrading of landfills and the development of new ones that meet the new Slovak standards, which were closely modeled on European Union standards.

The first prong was carried out by District authorities who identified unnecessary and unsuitable landfills, i.e. those without any potential to be brought into compliance with the new standards. The outcome was to close about 90% of the some 5000 pre-existing

disposal sites. All small dumps without operator were ordered closed. The remaining some 500 dumps and landfills were permitted to operate with temporary permits. By and large these were the bigger sites which accounted for the bulk of waste disposal in the first place.

Originally 1996 was set as the date by which all landfills were to be brought into compliance or alternatively be closed; this deadline was later amended to the year 2000. Whilst the above regulatory measure achieved the closure of the vast majority of dumps, the economic instrument providing incentives for the upgrading and development of new landfills accounts for the great number of landfills that have been subsequently been built or brought into compliance.

In 1991, the Ministry of Environment introduced an Act on Fees for Landfilling. One of the motivations was to provide an income for municipalities from landfill operations. Even more importantly, sharply differentiated fees were introduced on landfills that met the new technical/environmental standards and those that did not:

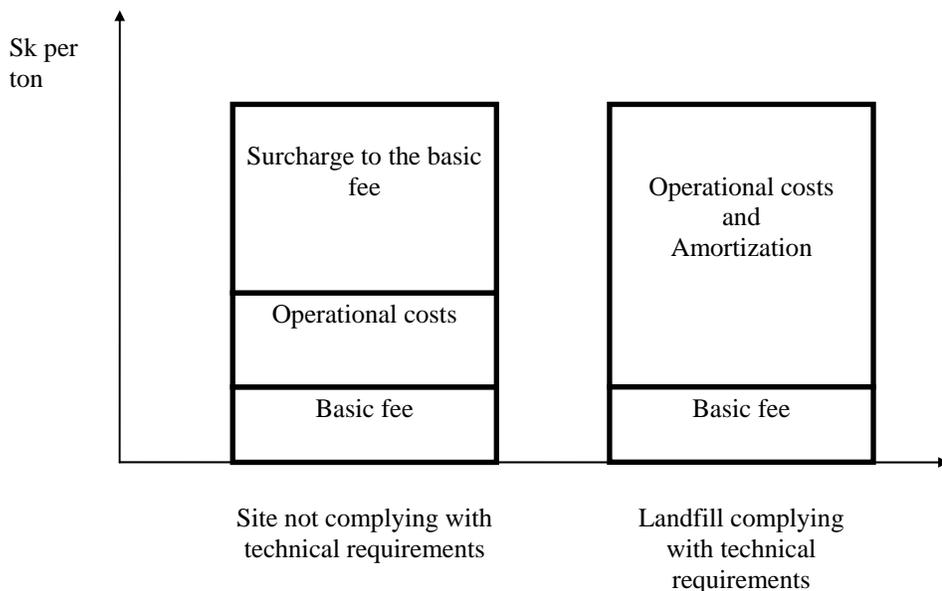
Type of waste	Charge A (Sk per ton)	Charge B (Sk per ton)
Waste soil (if categorized as other waste)	1	3
Other waste category	10	100
Municipal solid waste (MSW)	20	300
Special waste (except MSW and HW)	40	480
Hazardous waste (HW)	250	3500

The basic fee (the A-rate) was a fee per ton of waste landfilled imposed on compliant landfills. The landfill operator was in charge for collecting the fee. The beneficiary of this fee was the municipality where the landfill was located. This introduced an incentive for municipalities to accept a landfill at their territory and to guarantee a certain minimal revenue from landfilling to the municipal budget. It was up to the municipality to agree with the landfill operator on any other fees for return on investments and for operating a landfill.

A surcharge to the basic fee (the B rate) was levied on landfills operating with temporary licensed landfills which did not meet technical requirements for new landfills. The landfill operator was also in charge of collecting this fee. However, the beneficiary of this fee was the State Environmental Fund which used the revenues for supporting environmental projects. (The revenues were not earmarked for waste management, and grants to the waste subsector by the Fund were largely destined to landfill remediation and not for landfill construction.)

The surcharge under the B rate was intended to equalize the price of landfilling in “old” and “new” landfills, illustrated as follows:

Figure 2



By eliminating the difference between the low cost of dumping in unregulated landfills and the higher cost of properly constructed and equipped “EU standard” facilities, the incentive aimed to eliminate the cost advantage of dumping at unregulated local dumps. Municipalities as generators of waste became willing to transport their waste to a regional landfill that meet the standards than to dump in their own unsuitable landfills and pay the surcharge.

Apart from the magnitude of the surcharge, the distribution of the revenues from the charges provided the decisive incentive to municipalities to modernize. The revenue from the basic A rate reverted to the municipalities. Since in most cases in the early 90s the MSWM operator was either a department of the municipality or a company owned by the municipality, the payment of the A rate was just a transfer from one pocket of the municipality to the other pocket. However, as the revenues from the surcharge revert to the State Environmental Fund, and as the municipality had to pay this charge to the landfill operator who then had to transfer the funds to the SEF, the surcharge represented a new and significant expense for municipalities. It therefore provided a strong incentive to invest in landfills, and to invite private investors in the process, so as to avoid the surcharge.

### **The Effect: The Progress of Landfill Development after the Transition to the Present**

In 1991, there were only one or two landfills in the country which met the new Slovak standards (which in turn were modeled on EU standards.) By 1995, their number was over 100, leaving about 400 landfills operating under temporary permits. In the year 2000, according to the official data of the Ministry, 365 landfills operated in Slovakia, of

which 139 were in full compliance with Slovak regulatory standards, and 226 continued to operate under temporary permits. Between 1996 and 1999, permits were withdrawn from some some 200 landfills. All the landfills operating under temporary permits were closed down by August 1st 2000. Consequently, the surcharge on noncompliant landfills also lapsed.

By 2002, there were 156 compliant landfills in Slovakia, broken down by ownership and by use in follows:

***Compliant Landfills by Ownership, beginning of 2002***

Ownership	Number of landfills
Joint venture between municipalities and foreign investors	20
Joint venture between municipalities and local investors	8
Private company (local and foreign)	30
Wholly municipally owned companies, or municipal departments	76
Dedicated landfills of industrial companies mainly for their own use	22
TOTAL	156

Thus about half of landfills are owned by municipalities and municipal companies. The other half are either wholly privately operated (19 %) or joint ventures with private companies (17 %), or owned by industries (14 %). Some of the largest landfills are privately operated.

Today, waste management in Slovakia has the marks of a mature market. Landfills are being bought and sold and operators are changed. 124 landfills for municipal landfills is still a very large number for the size and population of the country, and further consolidation is predicted. The number of compliant landfills peaked in 2001 at 165; thus nine landfills were closed until early 2002. Some twenty five landfills were slated for closure in the next couple of years. It is noteworthy that the majority of the landfills to be closed were municipally owned and operated, leading to the increasing the share of the private or private public partnerships in the sector.

Be that as it may, the salient conclusion that stands out from the evidence is that the Slovak Republic was able to develop a network of EU conform landfills without budgetary support and subsidies, relying largely on economic incentives which were effective both in inducing foreign investment and in motivating municipalities to meet the new standards.

It is worth noting in conclusion that the Slovak (and Czech) policy was crafted by local decision-makers and economists, in a government strongly committed to the transition to the market economy and to fostering private investment and avoiding budgetary grants whenever private or municipal investment could be mobilized.