

DECENTRALIZATION OF THE  
WATER AND WASTEWATER  
SECTOR IN SLOVAKIA

WASH Field Report No. 433  
February 1994

**WATER AND  
SANITATION for  
HEALTH  
PROJECT**

Sponsored by the U.S. Agency for International Development  
Operated by CDM and Associates

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Prepared for the Bureau for  
Global Programs, Field Support, and Research  
Office of Health, Population, and Nutrition  
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under WASH Task No. 474

by

James S. McCullough  
and  
Fred Rosensweig

February 1994

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## ACRONYMS

MOE	Ministry of Environment
MOF	Ministry of Finance
MSM	Ministry of Soil Management
RBA	River Basin Authority (5 RBAs)
UFW	unaccounted-for water
USAID	U.S. Agency for International Development (overseas missions)
WASH	Water and Sanitation for Health Project
WS&W	water supply and wastewater
WWA	Water and Wastewater Authority (5 regional WWAs)

## EXECUTIVE SUMMARY

From August to December 1993, the Water and Sanitation for Health (WASH) Project assisted the government of Slovakia in its efforts to restructure the water and wastewater sector. At the request of the Europe Bureau, U.S. Agency for International Development (A.I.D.), a WASH team focused on identifying and analyzing options for restructuring the institutions which provide water and wastewater services at the local level.

The Slovak government has committed itself to a transformation of the water and wastewater sector from a highly centralized system to a locally controlled service. The sector is currently managed by five state-owned companies—four regional companies and one which manages service in the capital city, Bratislava; these companies are actually extensions of the Ministry of Soil Management. The impetus for restructuring the sector comes from the need to cut public subsidies and to transfer responsibilities to the appropriate level of government as well as local pressure to exert greater control over water and wastewater services.

The government of Slovakia has been examining a range of models for restructuring. To assist in this process, WASH collected information on current operations of the existing institutions in the sector. The team also conducted interviews with municipal officials, staff of the regional water and wastewater companies, and national-level officials. The WASH team was composed of American and Slovakian professionals working closely with municipal and national Slovak government agencies and nongovernmental organizations.

The work culminated in a two-day workshop in Bratislava in November, attended by key national officials, regional and district water authority staff, and municipal officials. The workshop served as a forum to discuss the WASH team findings and to initiate a planning process to guide the restructuring activities.

### **Financing the Sector**

The financial analysis revealed five key issues that must be dealt with in the restructuring:

- Under the current structure, the operating costs of providing water and sewer services are rising fast, without adequate mechanisms to contain them.
- The overall level of capital investment is too low, and for the next few years existing sources of grant financing are expected to shrink.
- There is no ready source of long-term credit for capital investment in the sector, even for financially sound projects.
- Some of the localities will be left with high-cost water and sewer systems, which they may not be able to manage on their own.



- Municipal governments are highly dependent on national transfers and shared taxes for current operations; at present, they have no financial resources for supporting water supply and wastewater sector operations or investment.

### **Restructuring Options**

Eight basic principles for restructuring emerged from the fieldwork. Most parties interviewed would concur with them. These principles are: 1) continuing delivery of services without disruption, 2) allowing flexibility in the arrangements which each municipality chooses, 3) transferring ownership and responsibility to the municipalities, 4) improving efficiency in the way in which water and wastewater services are currently managed, 5) maintaining combined responsibility for water and wastewater, 6) elimination of national operating subsidies, 7) providing access to funds for capital investment, and 8) allowing competition from the private sector for contract services.

Despite agreement on the above principles, a number of issues need resolution before restructuring can take place. These include wastewater financing, ownership of the transmission lines, ownership of the movable assets, access to specialized resources, design and ownership of the new water supply and wastewater corporate entities, management and financial capability of the municipalities, unserved communities and their needs, the future of the existing water and sewer companies, and payment for transfer of assets.

During discussions with Slovak officials, one option emerged which respected the basic principles and responded to most of the concerns expressed by personnel of the municipalities and the existing water and sewer companies. This option has the following features:

- Transferring ownership of the infrastructure for water supply distribution and wastewater collection and treatment to the municipalities
- Allowing each municipality to decide whether it will operate its system independently, join with other municipalities to form a smaller regional company to own and operate the transmission lines and facilities, or join with other municipalities to operate the distribution systems (leaving the ownership and management of the transmission lines to another company)
- Allowing municipalities freedom to contract out the management of the systems
- Hiring staff from existing water and sewer companies
- Transforming existing water and sewer companies into regional companies offering contract operations and maintenance, engineering design, and specialized services
- Distributing movable assets to the smaller companies at no cost.

## **Action Plan**

The report recommends a transition period of two years once the restructuring plan is approved. This period of time will allow the municipalities to prepare for their new responsibilities and existing water and sewer companies to transform themselves. The transition period is important to avoid disruption of services.

The first 12 months should be used as a preparation period; the new arrangements would actually go into effect at the end of the first year. During this period, six broad areas of activity are suggested:

- Improving the efficiency of the water and sewer companies
- Developing a process to assist the municipalities in making a decision about which option to choose
- Developing training programs for municipalities and future water and sewer authority personnel
- Developing an ownership plan for the new arrangements
- Establishing a mechanism for capital financing
- Reorganizing the existing water and sewer companies

The second 12 months should aim at helping the new structures get started. Assistance in this area would consist of technical assistance, training, and continued help in establishing the capital financing mechanism.

The action plan will require external assistance and funding to support a local organization to provide training and technical assistance to the municipalities. A careful program of assistance will increase the chances for long-term success.

## Chapter 1

### INTRODUCTION

#### 1.1 Overview

This report summarizes the findings of a Water and Sanitation for Health (WASH) Project team in providing technical assistance to the government of Slovakia. The purpose of the activity was to identify and analyze options for restructuring the institutions which deliver drinking water and wastewater services at the local level. This activity, conducted from August to November 1993, is the latest in a series of WASH activities supported by the U.S. Agency for International Development (USAID) in the water/sanitation sector in Slovakia. It is part of USAID's overall program of environmental assistance to East and Central Europe.<sup>1</sup>

The work was carried out by a WASH team composed of American and Slovakian professionals working closely with local and national Slovak government agencies and nongovernmental organizations.

The work has involved intensive data collection and field interviews in Slovakia and culminated in two-day workshop in Bratislava attended by key national ministry officials, regional and district water and wastewater authority staff, and municipal officials. The workshop served as a forum to discuss the WASH team findings and to initiate a planning process to guide the restructuring activities. During the workshop, there was a high level of thoughtful participation from all of the groups represented, demonstrating the importance attached to this subject at all levels of government in Slovakia today.

#### 1.2 Background

The Slovak Republic is in the midst of an economic and social transformation that is altering virtually every aspect of life within the country. Central to this transition is the changing role of government in providing public services to its citizens. Nowhere is that role more important than in the provision of drinking water and wastewater services.

The government of Slovakia has committed itself to a transformation of the water supply and wastewater (WS&W) sector from a highly centralized and subsidized delivery system to a locally controlled service in which local governments and communities play a dominant role.

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<sup>1</sup> Previous WASH activities are described in WASH Field Report No. 374, *Point Source Pollution in the Danube Basin, Volume I: Report on Data Management, Institutional Studies, and Priority Projects; Volume II: Institutional Studies—Bulgaria, the CSFR, Hungary, and Romania; Volume III: Country Technical Reports—Bulgaria, the CSFR, Hungary, and Romania*. Activities in 1992-93 are described in WASH Field Reports No. 407, *Water Quality Pre-Investment Studies in Four Danube River Tributary Basins: 1993 Summary Report* and No. 411, *Water Quality Pre-Investment Studies in the Hornad Basin in Slovakia*.

This is not an easy transformation, and Slovakia has observed the often disorderly manner in which many of its neighboring countries have attempted a similar transition.

Slovakia has a functioning public WS&W system which provides drinking water to about 75 percent of the nation's households and sewer services to about 50 percent through the five regional Water and Wastewater Authorities (WWAs). The WWAs are state owned companies which operate as separate "profit centers" in an accounting sense but function in reality as extensions of the Ministry of Soil Management (MSM). Highly subsidized by the central government in the past, the WWAs have implemented significant tariff increases over the past three years so that now the system overall is able to meet its operating costs from user fees.

Despite progress in making the WWAs more financially self-sufficient, the system still relies on the central government for a large portion of the capital investment, and those funds are simply not adequate to meet the needs across the country. Indeed, capital funds have been inadequate for some time, resulting in an accumulated backlog of investment needs, particularly in the wastewater area. Many areas suffer from inadequate coverage of sewerage networks (one-third of the households served by public drinking water remain unsewered); many wastewater treatment plants throughout the country are in poor operating condition. (See WASH Field Report No. 411.)

The impetus for restructuring the WS&W sector comes from both the national and local levels. At the national level, public sector subsidies in general must be cut, and service delivery responsibilities need to be reassigned to the most appropriate level of government and/or private sector. At the local level, there is a desire to exert control over WS&W services which are viewed as essentially local in nature and for which communities will increasingly bear the financial responsibility.

The government of Slovakia has been examining a number of alternative models for the provision of water and wastewater services while also considering different implementation strategies. The situation is complicated by the fact that many aspects of Slovak life and governmental institutions are also changing rapidly. For example, municipal governments themselves are assuming new responsibilities while their main sources of revenues are being completely overhauled.

Despite these uncertainties, the government of Slovakia has decided to transfer responsibility for water and wastewater services from the state authorities to the municipal governments. At the same time, the central government is also looking for ways to raise additional funds for investment and to insure equity in the distribution of WS&W assets. One controversial proposal under consideration would require municipal governments to pay for the WS&W assets transferred to them. This proposal is discussed in Chapter 2 below.

Another general issue is whether municipal governments have the right to refuse to assume responsibility for WS&W services. Recent national legislation makes clear that WS&W services are a *local* responsibility—the national government no longer will have the right or responsibility to provide the service. Therefore, if municipal government fails to assume responsibility, then, in principle, it falls to the residents themselves to provide the service. It

should be noted that many communities already provide their own services, i.e., the 2 percent of the population that is not served at all by the WWAs.

### **1.3 Scope of Work**

The main purpose of the WASH activity has been to help the key Slovakian decision-makers identify and evaluate alternative options for restructuring the water and wastewater delivery institutions. To do this, the team assembled a sizable information base on current operations of the existing sector institutions; data were gathered on financial performance of the WWAs over the past three years as well as financial flows within the sector.

In addition, the team conducted interviews with municipal officials and staff of the regional and district WWAs in order to understand the local circumstances under which the sector restructuring will occur. It became clear that no single model will fit the range of local circumstances in Slovakia; a flexible approach is required.

On the basis of the data collected, the team conducted analyses of the financial performance of the WWAs, capital financing flows, and municipal finances within Slovakia. The team also identified the set of "most likely" options for the restructuring; during this stage it became clear, however, that there was not really a set of mutually exclusive models but rather an emerging consensus option that seemed to fit the needs of the various interest groups. Therefore, in the latter stages of the analysis task, the team concentrated on developing this option more fully so that it could be critically reviewed.

The consensus option is described in Chapter 3 and may be broadly described as similar to the system of local water and sewer services found in the United States. In brief, this model allows individual municipal governments wide flexibility in choosing the type of service delivery that best fits its circumstances, whether that be a municipal water/sewer enterprise serving a single municipality or a regional authority serving several, or even many, towns.

The team presented its findings at a workshop held in Bratislava November 16-17. The workshop fully explored the consensus option and different suboptions that make up the approach. There was general agreement that the flexible consensus option should be pursued and that a two-year preparation and transition period would be required. The workshop also identified the legal, financial and institutional issues that must be dealt with in addition to questions about implementation.

The findings of the team's field work and workshop discussions are presented in the following chapters. Chapter 2 presents the results of the financial analysis and also discusses the key financial issues that must be resolved in the restructuring. Chapter 3 presents the restructuring options and, as noted above, gives primary attention to developing the consensus option. Chapter 4 presents the action plan for implementing the restructuring, based primarily on the results of the Bratislava workshop.

## Chapter 2

### FINANCING THE WATER AND WASTEWATER SECTOR

This chapter presents information on the structure and financial performance of the institutions in the WS&W sector. The information is based on financial data from the key agencies in the sector and interviews with personnel in those agencies. It should be noted that the information base also includes data collected under the previous WASH tasks in Slovakia and makes use of information provided by other technical assistance projects in the sector,<sup>2</sup> so that it represents as complete a picture as possible of the current financial situation in the sector.

#### 2.1 The WS&W Financing Structure

Figure 2.1 shows the major agencies and financial relationships in the Slovak WS&W sector. At the national ministry level, there are three major players:

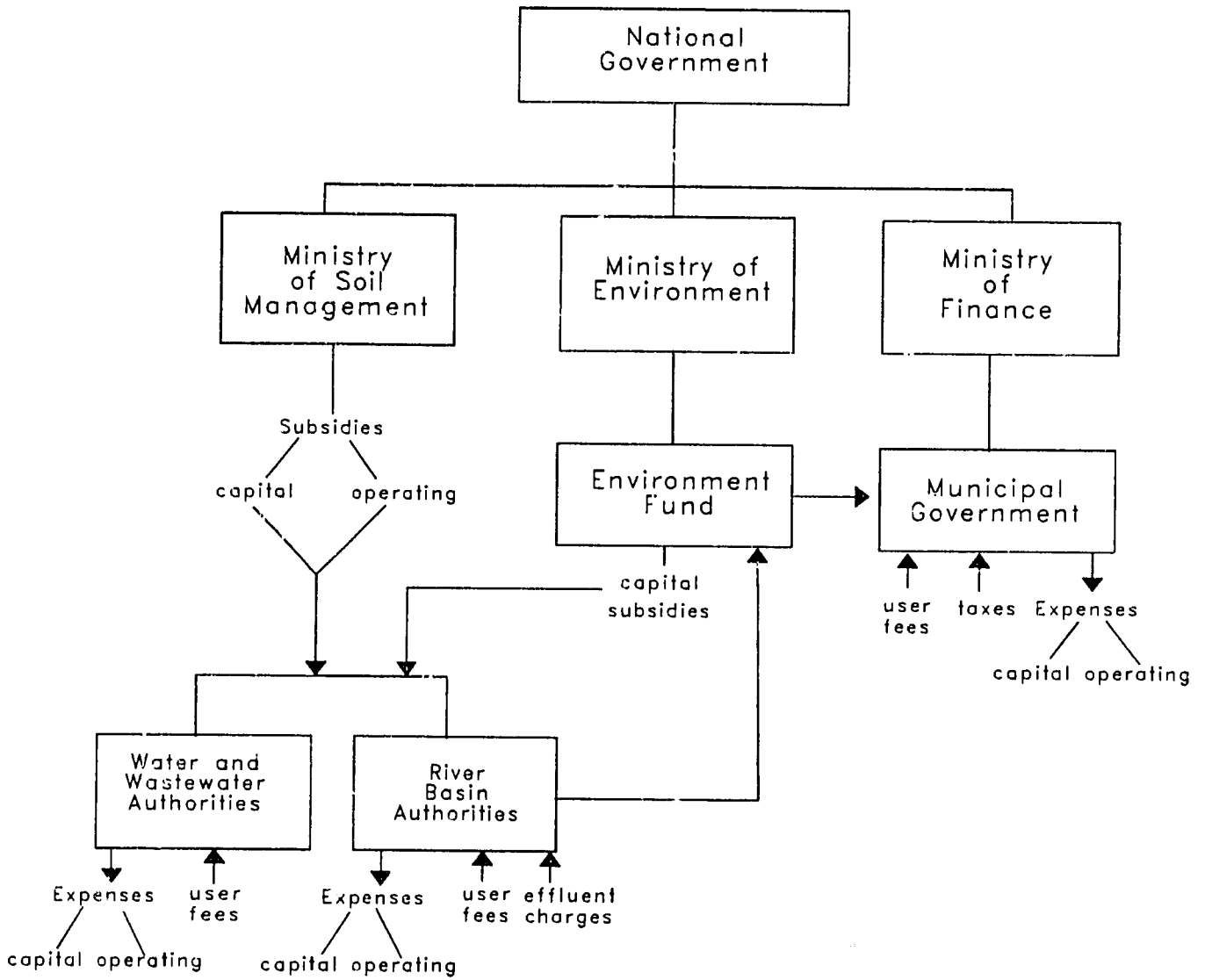
- The Ministry of Soil Management (MSM), which oversees both the four River Basin Authorities (RBAs) and the five regional Water and Wastewater Authorities (WWAs);
- The Ministry of Environment (MOE), which oversees the Environment Fund among its many functions; and
- The Ministry of Finance (MOF), which oversees the national budget (providing subsidies to the sector through the MSM and Environment Fund), provides budget support to municipal governments, and regulates tax policy at the national and municipal levels.

The financial flows in the sector are complex. The WWAs generate operating revenues from user fees, although in the past those fees have not been sufficient to fund all operating costs. Therefore the MSM has provided operating subsidies to the WWAs on an as-needed basis, with most of the subsidies going to the Eastern Slovakia WWA.

The MSM also provides funds for new capital investment for all of the regional WWAs. In addition, the Environment Fund also provides capital investment for projects of the WWAs on a competitive grant basis. The Environment Fund, in turn, receives part of its funding each year from effluent fees collected locally by the River Basin Authorities and part from the national budget. Finally, each WWA funds some capital investment each year from internally generated funds set aside for depreciation of fixed assets.

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<sup>2</sup> Other USAID projects including Center for Clean Air Policy (CCAP) Program for Czech Republic and Slovakia, Environmental Law Institute Program for Central and Eastern Europe, and the Urban Institute Project in Eastern Europe.



**Figure 2.1**  
**Major Agencies and Financial Relationships in the**  
**Water Supply and Wastewater Sector**

Figure 2.2 puts all of these flows of funds together for 1992, showing the origination and routing of the funds. The figures show that approximately 75 percent of the total funding in the sector, both operating revenues and capital investment, derive from local sources—either WWA user fees or effluent fees collected by the River Basin Authorities. The total amount generated at the local level in 1992 reached Kcs3.3 billion.<sup>3</sup> The remainder of Kcs1.1 billion devoted to the sector in 1992 came from the national budget in three types of subsidies: operating and capital subsidies channeled through the MSM and a budgetary contribution to the Environment Fund, some of which was passed on as grants to local water and sewer projects.

While the sector may have been extremely dependent on central budget subsidies in the past, by 1992 the sector had become largely reliant on local user contributions. It should also be noted that municipal governments contributed virtually nothing from their own budgets to the sector.

The funds available for capital investment in the sector are also expected to decrease in the near future, primarily as the result of national budget shortfalls and reduced effluent fees going to the Environment Fund. There are proposals to develop some form of environmental loan fund, either as part of the Environment Fund or as a separate revolving fund (Center for Clean Air Policy 1993). However, those plans are still in the discussion stage, and no firm plans are in place to implement a loan program. This means that capital investment in the sector will continue to be dependent on existing grant channels (with reduced overall funding) and internally generated revenues of the local water and sewer authorities. Indeed, one important aspect of the overall financing system for the WS&W sector is the complete absence of a long-term credit system for any type of local infrastructure, not just water and sewer services. The central government has yet to decide how best to proceed with filling this gap. In the meantime, municipal governments have access only to short-term, commercial bank credit which is poorly matched to the needs of long-term infrastructure financing.

An important relationship in the data summary in Figure 2.2 is the proportion of annual capital investment to operating expenditures. In 1992, capital investment in the sector reached Kcs1.8 billion or 69 percent of the amount spent on current operating expenditures (after depreciation is taken out). This ratio is substantially lower than that found in the United States, where water/sewer authorities over the past 20 years have averaged about 1:1 in terms of capital investment to operating expenditures.<sup>4</sup>

Given the current level of sewerage coverage and wastewater treatment in Slovakia (only 50 percent of households are seweraged), one would expect to find a much higher proportion of

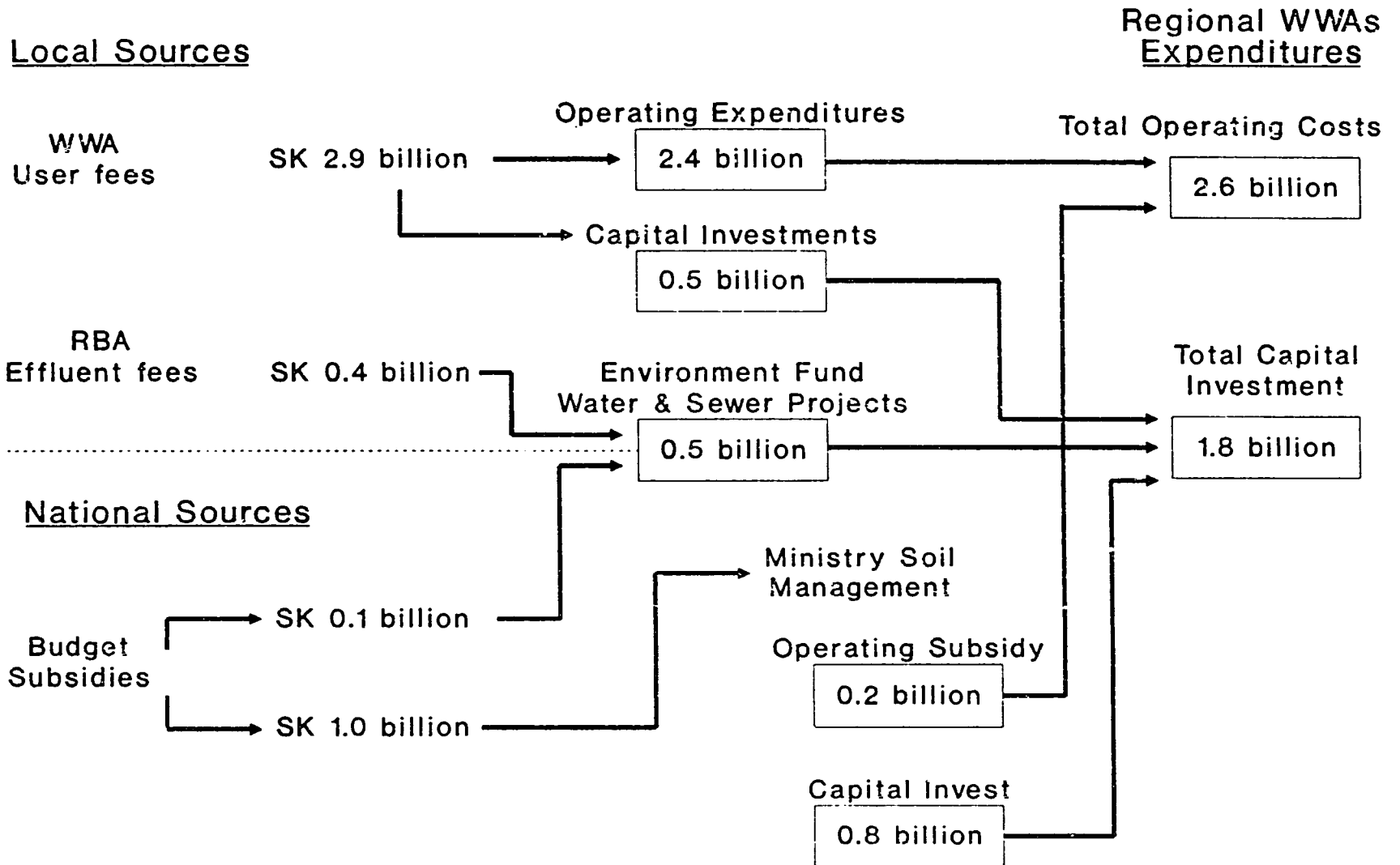
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<sup>3</sup> These figures use the currency designation Czechoslovak crowns (Kcs) which was in use in Slovakia until 1993 when Slovakia created its own currency, the Slovak crown (Sk). The value of the two currencies was identical at the time of the Sk creation, but a devaluation in July 1993 has lowered the value of the Slovak crown to about 90 percent of the Czech crown.

<sup>4</sup> See James S. McCullough et al., *Financing Wastewater Services in Developing Countries*, Chapter 3 for a discussion of WS&W investments in the United States.



Figure 2.2 Flow of Funds in Water and Wastewater Sectors, 1992



sector expenditures being devoted to new capital investment. By way of comparison, in the United States in 1972 (on the eve of the first Clean Water Act), the proportion of annual capital investment to operating expenditures in the WS&W sector stood at about 116 percent—a proportion closer to what we might expect to see in Slovakia today.

The relatively low level of capital investment means that the WS&W sector in Slovakia cannot make up deficits in coverage and may not be able to replace and maintain the current level of infrastructure. Clearly, any major progress in the wastewater sector will require major infusions of capital beyond what is currently available within the sector.

## 2.2 Financial Performance of WS&W Institutions

Figure 2.3 shows descriptive data on the five regional WWAs. It should be noted that Bratislava comprises a single WWA with no subdistricts; although it is operationally independent, the Bratislava WWA does buy some bulk water from the Western Slovakia WWA.

NAME	Districts	Population served by water	Water Sold (1000 m <sup>3</sup> )	WWA Employees
Bratislava	1	439,498	72,039	886
Western Slovakia	11	1,228,817	117,990	3200
Northern Slovakia	7	632,906	56,062	1788
Middle Slovakia	7	625,127	70,507	1944
Eastern Slovakia	12	1,041,172	109,669	3540

**Figure 2.3**

Characteristics of Regional Water and Wastewater Authorities, 1992

Figures 2.4 and 2.5 show the cost per cubic meter of water and wastewater over the last 3 years for the 5 regional WWAs. These calculations are based on the reported production and distribution costs by the 5 companies. The figures reveal several important points:

- The cost of water has increased on average about 26 percent per year over the three-year period, more or less in line with inflation.
- The cost of sewerage service on average has increased at a much slower rate, about 10 percent per year.

Figure 2.4

# Water Cost per Cubic Meter

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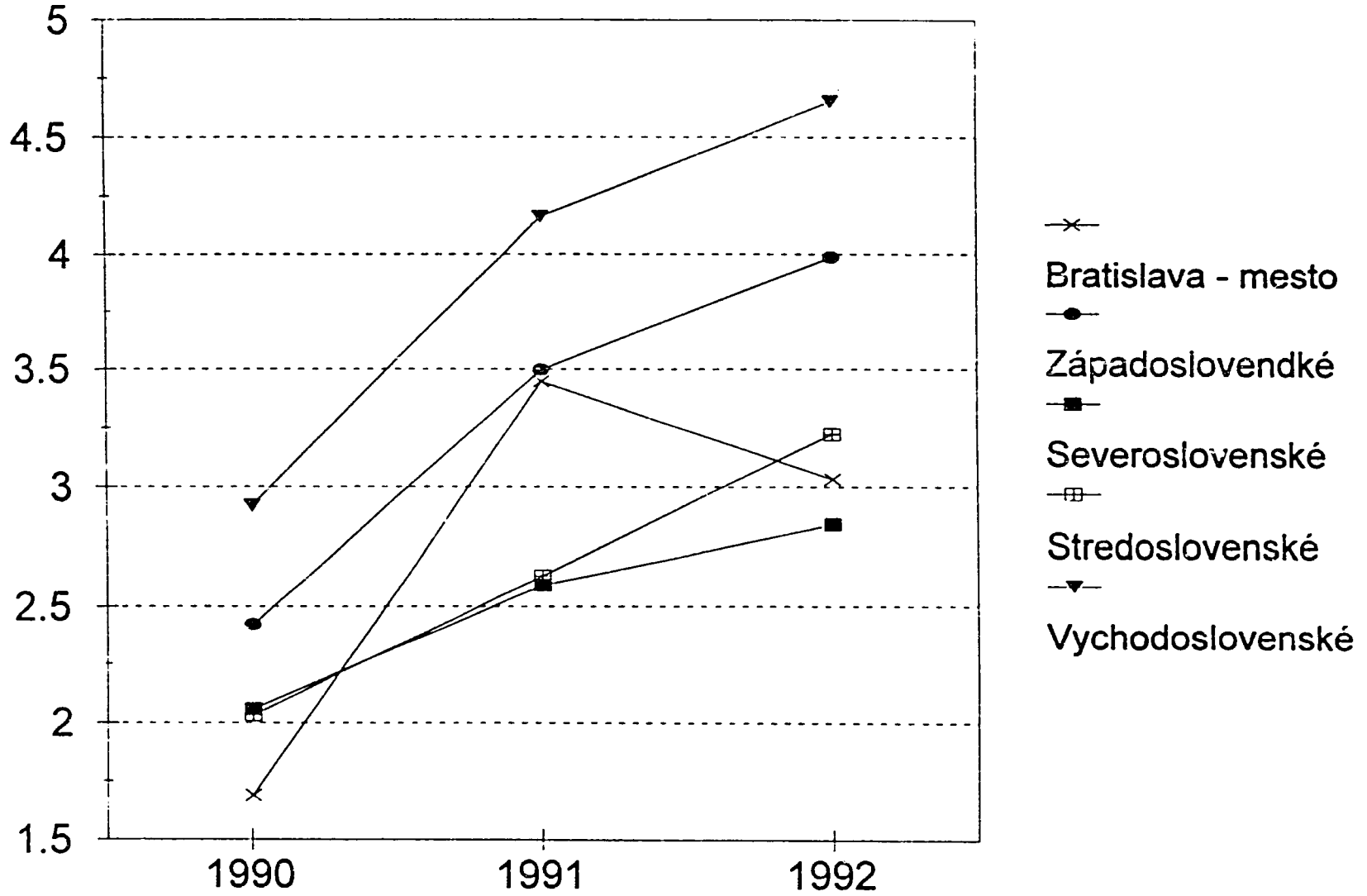
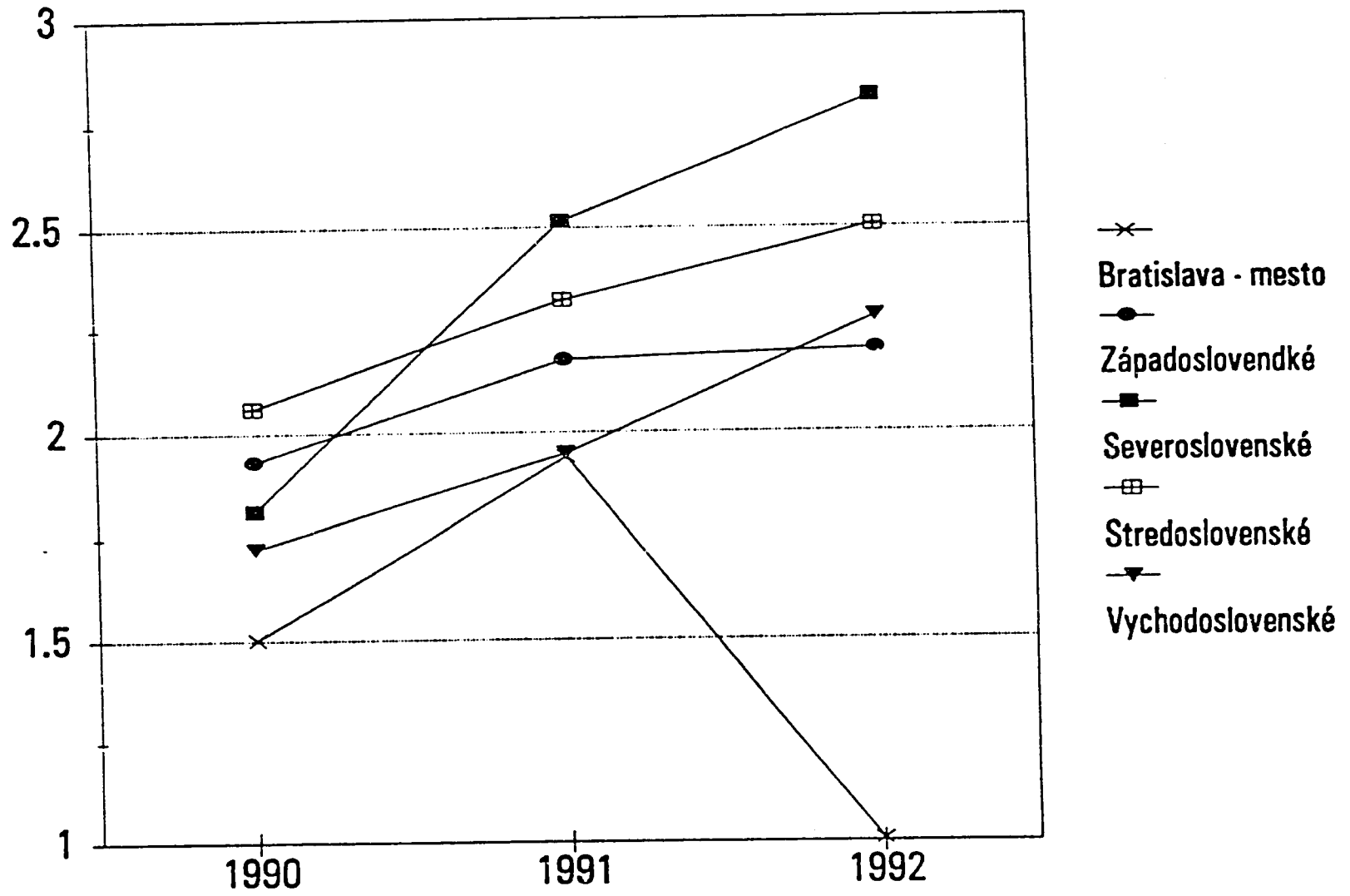


Figure 2.5

### Sewer Cost per Cubic Meter



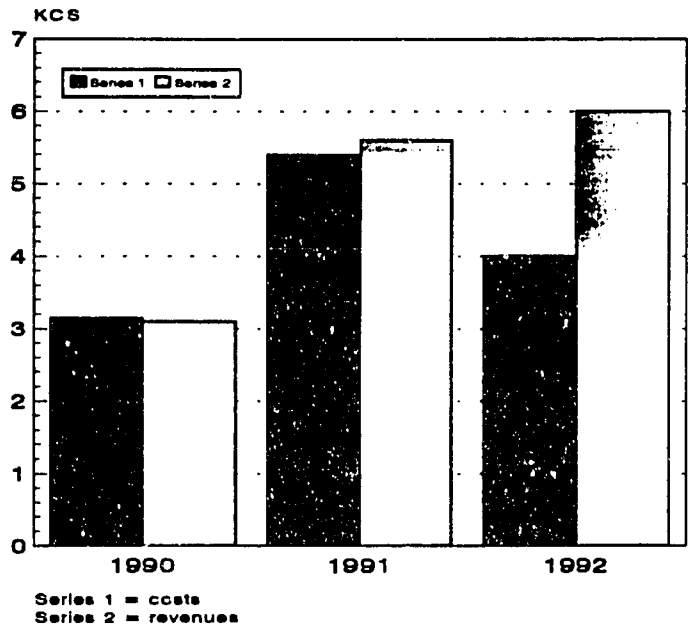
- Eastern Slovakia WWA has remained the highest-cost supplier for drinking water throughout the period and, in fact, the cost gap is widening between Eastern Slovakia WWA and the lower-cost producers (notably Bratislava, Northern, and Middle Slovakia WWAs).
- While all of the WWAs have seen the combined cost of water and sewer service rise during the period, Bratislava has managed the smallest rise, mainly due to a reduction in its sewer costs in 1992.

Figures 2.6 through 2.10 show the comparison of operating costs and operating revenues for combined water and sewer services for the five WWAs over the last three-year period. The figures, taken as a group, indicate the following:

- All of the regional WWAs were in deficit in 1990 when operating expenditures exceeded revenues.
- All of the companies have shown virtually the same revenue performance, doubling from about Kcs3.0 to about Kcs6.0 per cubic meter over the three-year period.
- The cost performance of the companies, however, has differed dramatically over the same period, with Bratislava holding down its cost increases to produce the largest operating surplus in 1992.
- Three of the WWAs improved from a deficit in 1990 to a surplus in net operating revenues in 1992, with Western Slovakia WWA almost breaking even; Eastern Slovakia WWA remains in a substantial deficit, mainly due to very steep cost increases.

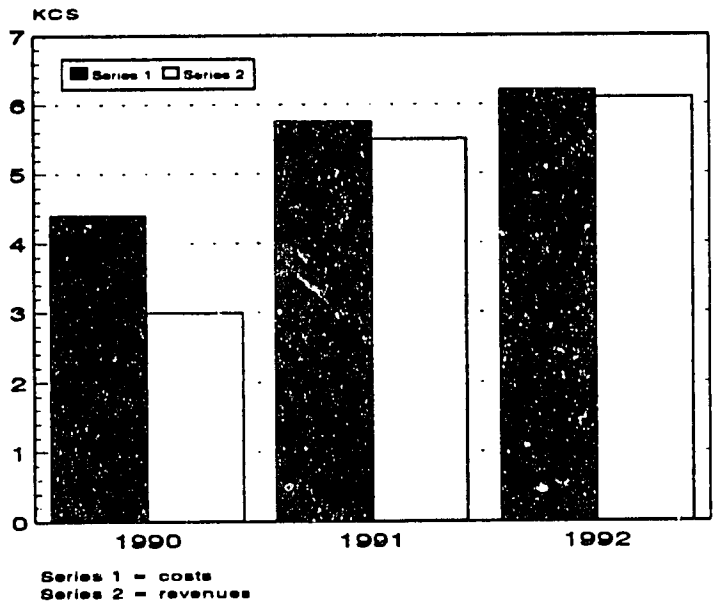
There are several implications from this analysis across the five regional WWAs. First, the East Slovakia WWA shows deteriorating performance relative to the other companies, mainly on the cost side. Second, tariff increases in mid-1991 did not appear to reduce consumption dramatically, allowing revenue growth to remain strong. The January 1993 increase in household tariffs for water and sewerage, from Sk3.0 to Sk7.0, would be expected to have a more substantial impact on consumption. Third, the fact that costs rose in line with inflation suggests that there were few incentives to become more cost-efficient, such as making staff reductions, a common occurrence in commercial enterprises throughout Slovakia in the last two years.

The comparison of the cost and revenue data of the five regional WWAs shows some variation across the regions. If we examine the costs of water production and distribution on a district level, we would expect to find even larger differences. This is important since the WS&W services will likely be decentralized to the district level or even the municipal level.



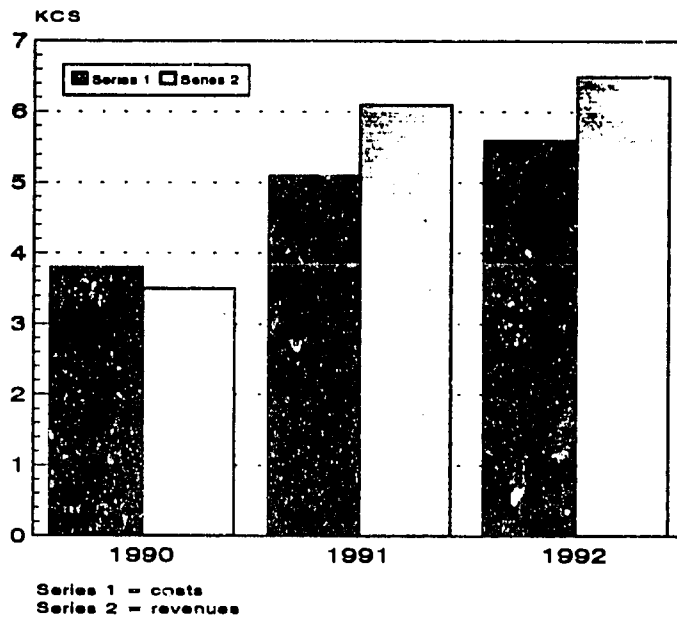
**Figure 2.6**

**Bratislava**  
**Water and Sewer Charge per m<sup>3</sup>**



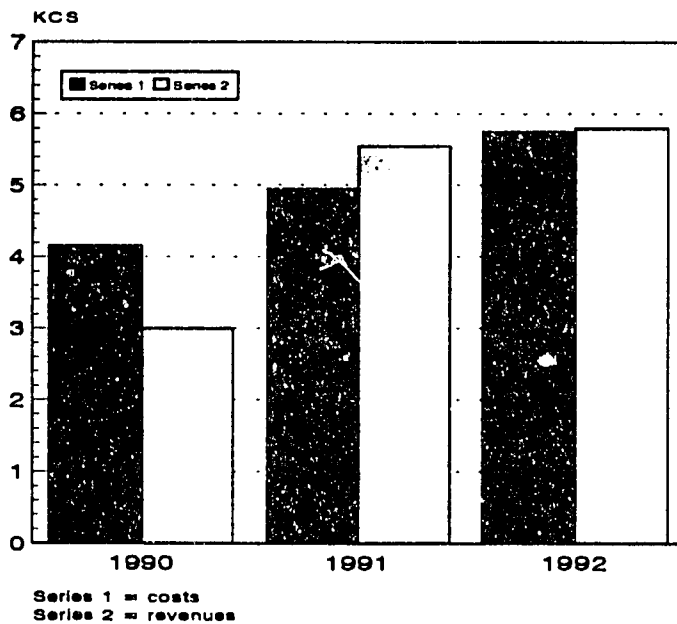
**Figure 2.7**

**West Slovakia**  
**Water and Sewer Charge per m<sup>3</sup>**



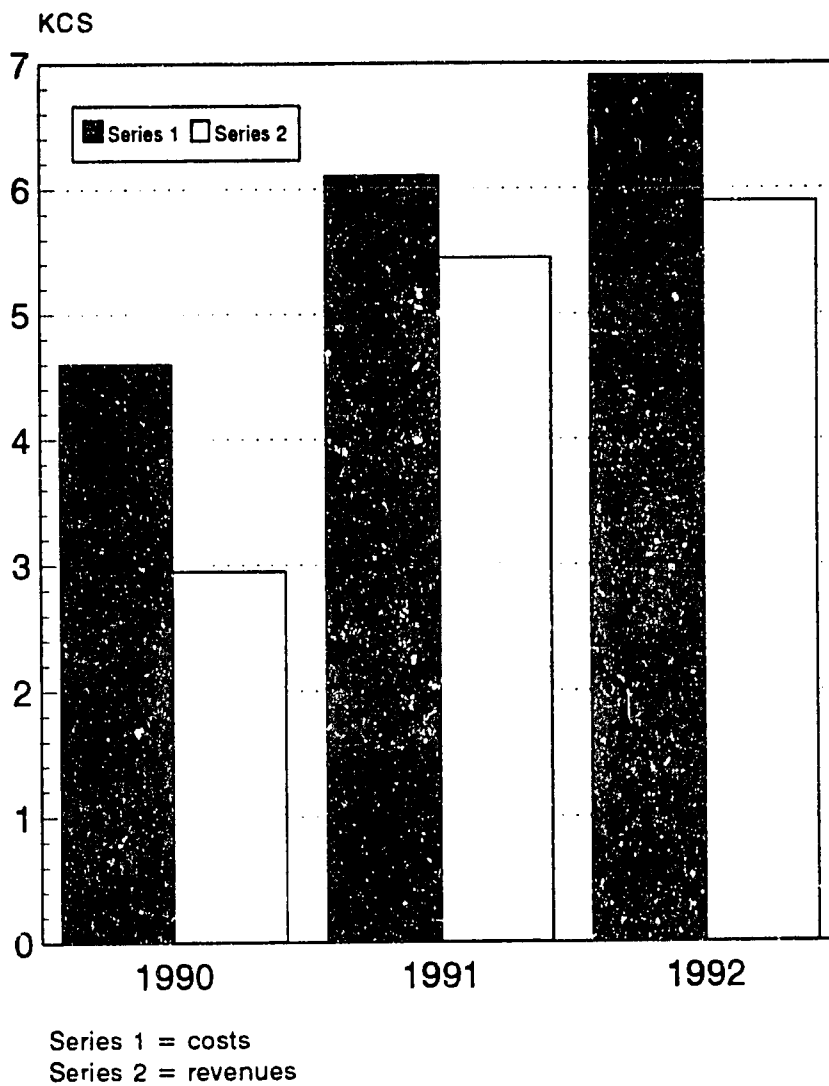
**Figure 2.8**

North Slovakia  
Water and Sewer Charge per m<sup>3</sup>



**Figure 2.9**

Middle Slovakia  
Water and Sewer Charge per m<sup>3</sup>



**Figure 2.10**  
**East Slovakia**  
**Water and Sewer Charge per m<sup>3</sup>**



Figure 2.11 lists the WWA districts with the ten highest and ten lowest costs per cubic meter of water in 1992. There are currently 38 districts in Slovakia. This list illustrates several important points:

- The highest cost is five times greater than the lowest.
- The vast majority of the high-cost districts (7 of 10) are located in the Eastern Slovakia WWA.
- A substantial number of WWA districts in 1992 have operating costs already at or above the maximum water tariff of Sk4.0 which was introduced in 1993.

The large number of districts with high costs of water presents a dilemma: will these districts be able to operate without large subsidies? It is unclear why these costs are so high and if operating efficiencies can be made to reduce them. For the present, this should be noted as a potential problem in the breakup of the regional WWAs.

**Figure 2.11**

Districts with Highest and Lowest Water Cost (in Sk per m<sup>3</sup>)

	HIGHEST		LOWEST
Rimavská Sobota	3.87	Zvolen	2.02
Velký Krtíš	4.64	Martin	2.17
Senica	5.07	Lučenec	2.19
Humenné	5.81	Banská Bystrica	2.23
Rožňava	6.35	Komárno	2.72
Trebišov	7.76	Prievidza	2.74
Bardejov	8.03	Žilina	2.82
Michalovce	8.33	Trnava	2.87
Stará Lubovňa	8.87	Dunajská Streda	2.98
Svidník	10.30	Bratislava	3.04

### **2.3 Performance Improvement in WWAs**

The data above suggest that performance improvements can be made in the WWAs, particularly on the cost side. Although detailed data are not available to judge how much improvement can be made, the team was able to examine two key variables: staffing ratios and unaccounted for water.

Figure 2.12 shows the staffing ratios of the five WWAs in terms of number of employees per 1,000 population served. The United States figure of 1.9 employees per 1,000 population

**Figure 2.12**

**Staffing Ratios of Water and Wastewater Authorities**

	Employees per 1000 Population Served
Slovakia WWAs (Total)	2.9
Bratislava	2.0
West Slovakia	2.6
North Slovakia	2.8
Middle Slovakia	3.1
East Slovakia	3.4
USA (average)	1.9

gives a general benchmark, but many factors can influence the staffing ratio including the level of automation. Figure 2.12 shows that Bratislava WWA has the lowest staffing ratio, as expected given its population density. The regions which are most spread out have the highest ratios. However, compared to the U.S. figure, the Slovak WWAs appear to be somewhat overstaffed, possibly by 40 to 60 percent, even considering the differences between the United States and Slovakia.

Figure 2.13 shows the level of unaccounted-for water (UFW) by regional WWA in 1992 and comparisons with the United States and Canada. (The Slovak figures are those reported to

**Figure 2.13**

**Unaccounted-for Water Rates in Slovakia, the United States, and Canada**

Slovakia WWAs (Total)	27.7%
Bratislava	26.2%
West Slovakia	20.9%
North Slovakia	36.0%
Middle Slovakia	32.3%
East Slovakia	26.8%
USA (average)	11.0%
Canada (average)	12.0%

the MSM and reflect the difference between water produced and water sold.) Once again, the much higher figure in Slovakia indicates a performance gap that should be reduced. The high level of UFW is a particular problem in a country like Slovakia where constraints on new capital investment make it difficult to expand water supplies. This means that capital invested in new source works is much less productive since about 30 percent, on average, of any additional supply is lost. Furthermore, measures to reduce UFW will add directly to overall water supply capacity, reducing the need for new capital investment.

## 2.4 Revenue Improvement Potential

In the current fiscal climate in Slovakia, additional revenues for the WS&W sector cannot be expected from the central government in the form of subsidies. Rather, additional revenues will have to come from the local level, either from user fees or municipal revenues.

### *Scope for Increased User Fees*

Tariffs were raised in Slovakia in January 1993, bringing the combined (water + sewer) tariff to Sk 7 per cubic meter for households, or about US\$0.25 per cubic meter at the time.<sup>5</sup> Tariffs for industrial and commercial consumers are negotiated with no formal price ceiling, but the normal range across Slovakia for this class of users runs from Sk 12 to Sk 22 in 1993. Figure 2.14 shows a comparison of the Slovak household rate with the prevailing average tariff rates in Hungary and the United States.

**Figure 2.14**

Comparisons of GDP/Capita and Household Water Tariffs  
in Slovakia, Hungary, and the United States, 1992

	Slovakia	Hungary	USA
GDP/Capita	US\$ 1850	US\$ 2990	US\$ 22,240
Tariff (combined water and sewer per cubic meter)	US\$ 0.25	US\$ 0.71	US\$ 0.80
Tariff as proportion of GDP/Capita (\$1000)	13.5	23.7	3.6

<sup>5</sup> Subsequent devaluation of the Slovak crown in July 1993 has brought that figure to about US\$0.22 in the fall of 1993.

In absolute terms, the Slovak rate is not high. However, by comparison to GDP/capita, the Slovak rate is high but still below the prevailing rate in Hungary (which is admittedly quite high by comparison to other European countries.) This suggests that there may be some room for further increases in Slovakia, particularly to keep up with inflation, but that the household tariff will probably not be able to exceed Sk 12 per cubic meter (in 1993 crowns), which would put the household tariff in Slovakia at rough parity with the average tariffs in Hungary, adjusted for inflation.

Past performance of the WWAs suggests that any tariff increases are likely to be consumed in operating cost increases unless incentives for greater cost efficiency are introduced.<sup>6</sup> Overall, it appears that the current level of tariffs in 1993 should be sufficient to recover operating costs of WWAs and that any subsequent revenue increases should be devoted to financing capital investment.

### *Scope for Municipal Contributions to the Sector*

In most other middle-income countries, local governments devote some income to water supply and wastewater infrastructure investment. In addition, since local governments have taxing authority, they also have the potential to guarantee loans for construction of such infrastructure.

Unfortunately, Slovakian municipal governments do not have adequate revenue authority at present either to contribute to water and sewer investments or to guarantee loans. Figure 2.15 shows the aggregate revenue budgets for municipal governments in Slovakia for 1991-1993.

Figure 2.15 shows that municipal governments in total have experienced a sharp drop in total revenues, from over 20 billion crowns last year to about 11 billion this year. The 1992 figures, up from about Kcs 16 billion in 1991, were inflated by temporary transfers in order to meet needs for completion of housing projects under construction and emergency loans to municipal governments.

Municipal governments are dependent on the national government for over half of their total revenue in 1993. Local revenues, comprised of local taxes and sale of municipal assets account for about 42 percent of their total municipal budgets. The rest comes from shared taxes from the state (44 percent) and capital investment subsidies (14 percent), also from the state budget.

There have been some significant changes in local tax sources introduced in the last year which raises questions about how predictable and stable these revenues might actually be. The major changes include: elimination of operating and capital subsidies for public housing enterprises, revamping of the tax base and municipal share of the wage tax, reassignment of the tax on entrepreneurial activity and municipal enterprises from municipal to national level,

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<sup>6</sup> This has been the unfortunate experience in Hungary where tariffs have been raised tremendously over the past 4 years—see WASH Field Report No. 409 *Water Quality Pre-Investment Studies in the Sajo-Ternad Basin in Hungary*, 1993.

**Figure 2.15**

**Overall Municipal Revenues in the Slovak Republic  
Initially Budgeted and Actual, 1991–1993 (in Kcs billions)**

	1991 <sup>1</sup>		1992		1993
	Budget	Actual	Budget	Actual	Budget
<b>LOCAL TAXES AND FEES</b>			2.31	3.45	3.40
House tax			.12	.13	--
Tax from agricultural land			.03	.06	--
Property tax			--	--	2.70
Tax on entrepreneurial income			1.08	1.46	--
Local fees			1.02	1.69	.62
Administrative and other fees			.06	.11	.08
<b>REVENUES FROM MUNICIPAL ASSETS</b>			.71	1.80	1.20
Earnings tax from municipal entities			.06	.15	--
Payments on financial plan			.00	.04	--
Tax on wages of municipal employees			.25	.36	--
Rev's of budgetary, cntbty organizations			.35	1.03	.50
Revenues from property sales			--	--	.70
Rent			.05	.23	--
<b>SHARED TAXES FROM STATE:</b>			4.74	4.20	4.74
Share of wage taxes <sup>2</sup>			3.27	3.52	--
Share of tax on agricultural incomes			1.46	.68	--
Share of tax on dependent income			--	--	4.74
<b>OTHER REVENUES</b>			--	4.54	.28
<b>SURPLUS FROM PREVIOUS YEAR</b>			--	--	--
<b>TOTAL "OWN" REVENUES</b>			7.75	14.00	9.61

	1991 <sup>1</sup>		1992		1993
	Budget	Actual	Budget	Actual	Budget
<b>SUBSIDIES FROM STATE BUDGET</b>			2.45	6.63	1.52
Nonspecific subsidies			.21	.20	--
Specific subsidies:			2.24	6.38	1.52
To operate housing agencies			.30	.24	--
To complete housing complexes			--	4.20	--
Urban transit operating subsidies			1.10	1.09	.88
Urban transit capital subsidies			.85	.85	.43
Municipal self-administration; other			--	.05	.21
<b>TOTAL REVENUES</b>	<b>15.18</b>	<b>16.17</b>	<b>10.21</b>	<b>20.63</b>	<b>11.14</b>

<sup>1</sup> Only totals are reported because of data noncomparability.

<sup>2</sup> Levied at a rate of 13 percent in 1991 and 18.5 percent in 1992.

and replacement of the house tax and property fees with a single property tax (Firestone 1993). In addition to expected problems in implementing the new structure, the changes in local taxing authority should result in less buoyant taxing powers at the local level, meaning that local revenues will not necessarily rise quickly once economic activity picks up. In any event, for the near term municipal governments simply have little revenue to contribute to the WS&W sector.

The current low level of municipal revenue raises serious questions about the proposal for municipal governments to pay for the transfer of water and sewer assets. The estimated book value of WS&W fixed assets (including distribution lines, treatment plants, and transmission lines) is about Sk 24 to 27 billion.<sup>7</sup> Were municipal governments simply to pay off this obligation over 10 years at no interest, they would pay Sk 2.4 to 2.7 billion annually, or about one quarter of their entire budgets in 1992. This is clearly not feasible.

A second question raised is the relative size of the financial management task that might be taken on by municipal governments, given the size of their current financial responsibilities. In the aggregate, municipalities now manage about Sk15-16 billion annually. The annual expenditures of the WS&W agencies amount to about Sk4.5 billion. Were municipalities to

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<sup>7</sup> These estimates are imprecise because the value of inputs in the creation of the assets contained many hidden subsidies; furthermore, there is a considerable amount of WS&W construction in progress, some of it up to 15 years old, that is not counted.

take on this additional responsibility, it would increase their financial scope by about 30 percent. This is a sizeable, but not overwhelming, increase in financial responsibility.

## **2.5 Implications of the Financial Analysis**

The financial analysis above has revealed five key issues that must be dealt with in the restructuring:

- Under the current structure, the operating costs of providing water and sewer services are rising fast, without adequate incentives or mechanisms to contain them;
- The overall level of capital investment is too low, and for the next few years existing sources of grant financing are expected to shrink;
- There is no ready source of long-term credit for capital investment in the sector, even for financially sound projects;
- Some portion of the localities will be left with high-cost water and sewer systems which they may not be able to manage independently; and
- Municipal governments are highly dependent on national transfers and shared taxes for current operations and have no financial resources for supporting WS&W sector operations or investments at present.

### *Need for Cost Controls*

The financial performance of the WWAs over the past several years is the most compelling reason for altering the current system. Under the existing circumstances, the regional WWAs have no incentive to control costs or to generate operating surpluses which can be used to fund capital investment. It is true that the WWAs, as a group, have gone from an operating deficit to a slight operating surplus over the past 3 years. Because of high non-operating costs, however, the WWAs still show a net loss in 1992.

Figure 2.16 is the combined revenue and expenditure position for 1992 for the five regional WWAs as a group. This figure shows that the WWAs spent over 96 percent of operating revenues (tariffs) on current operating expenditures. By comparison, in a well-managed water/sewer utility in the United States, this figure would be between 70 and 75 percent.<sup>8</sup> The WWAs also had negative non-operating revenues, giving them a loss in 1992 of 2.2 percent of operating revenues. By way of comparison, the net revenue position of a well-managed utility in the United States would be a surplus of about 25 to 35 percent.

Although the WWAs show almost 30 percent devoted to depreciation (and hence available for investment in replacement of plant and equipment), they only spent about 19 percent on

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<sup>8</sup> All percentage figures in the discussion of Figure 2.16 are given as percentage of operating revenues (tariff charges).

**Figure 2.16**

**Revenues and Expenditures of Slovak Regional Water  
and Wastewater Companies in 1992**

(All figures shown as % of Operating Revenues)

	Slovak WWAs	USA Example
Total Operating Revenues	100%	100%
Total Operating Costs	96.4%	72.3%
■ Direct Costs	66.7%	55.9%
■ Depreciation	29.7%	16.4%
Net Operating Revenue	3.6%	27.7%
Net Non Operating Revenue	-5.8%	4.4%
■ Non Operating Revenue		14.6%
■ Non Operating Costs		
□ Interest Expense		10.0%
□ Other Costs		0.2%
Net Revenue	-2.2%	32.1%
Working Capital Needs	(24.1%)	(18.1%)
Available for Capital Investment	-26.3%	14.0%
New Capital Investment		
■ From Depreciation	29.7%	16.4%
■ From Net Revenue	(26.3%)	14.0%
■ From Loans	0.0%	39.6%
Actual Cap Investment (from WWA sources)	18.6%	70.0%

capital investment; the rest of the capital investment funds comes from grants from the central government. The WWAs do not borrow for capital investment whereas in the United States, a typical water/sewer authority will borrow about 40 percent for new capital investment. Combined with internally generated funds of an additional 30 percent (from depreciation and net revenues), the typical water/sewer authority in the United States will fund about 70 percent of its total capital investment needs from its own resources. The rest comes from contributions—a combination of (a) grants from local, state and national government and (b) facilities built by private land developers and customers of the water/sewer authority. The water/sewer authorities in the United States are able to operate in this manner because they generate substantial operating surpluses from user fees. The key to this, of course, is to control costs while maintaining revenue generation. So long as operating costs can be contained,



Slovakia has an excellent opportunity right now to greatly improve the financial position of WWAs, since tariffs have more than doubled this year.

### *Increasing Levels of Capital Investment*

The rationale for generating surplus operating revenues is to permit higher levels of capital investment. In Slovakia for the near term, the only source of additional capital investment appears to be from internally generated funds of the WWAs themselves. Neither the central government nor the municipal governments are likely to be able to provide any additional funds under current fiscal constraints.

With the 1993 tariff increase, the WWAs as a group should be able to generate a substantial surplus in net revenues. This surplus can be used to fund capital investment directly or be "leveraged" by borrowing, with the surplus used to cover the debt service (interest and repayment of principal) on the borrowed funds.

Figure 2.17 presents two different scenarios showing the amount of capital investment available to the WWAs with certain changes to the financial management of the authorities.

**Figure 2.17**

### Estimating Funds Availability for New Capital Investment in WS&W Facilities under Alternative Scenarios

	Actual 1992 Experience in WWAs	Scenario 1: Increase net revenue to 15%	Scenario 2: Increase net revenue to 30%
Net Revenue Surplus			
■ Total	0	Sk435 million	Sk870 million
■ 50% available	0	Sk218 million	Sk435 million
Depreciation			
■ Total	Sk861 million	Sk861 million	Sk861 million
■ Amt devoted to Cap Investment	Sk487 million	Sk861 million	Sk861 million
State Subsidies (Cap Investment)	Sk900 million	Sk900 million	Sk900 million
RBA Effluent Fees	Sk437 million	Sk437 million	Sk437 million
<b>TOTAL CAPITAL INVESTMENT</b>	<b>Sk1,824 million</b>	<b>Sk2,416 million</b>	<b>Sk2,633 million</b>
Capital Investment as % of Op Expenses	75%	100%	110%
% Capital Investment Generated by WWA	27%	46%	51%

The changes include (a) devoting all of the amount set aside for depreciation to capital investment and (b) generating a net revenue surplus (after depreciation), with two different levels of surplus examined: 15 percent and 30 percent. In Figure 2.17 we assume that only half of the surplus would be devoted to capital investment, with the remainder held in reserve and used as working capital. The level of capital investment subsidy from the state budget is held constant (with operating subsidies eliminated), and the level of effluent fees is also held constant.

The scenarios in Figure 2.17 show that the level of capital investment could be increased by about one third if the WWAs achieved a surplus of 15 percent. This would give the sector about a 1 to 3 ratio of capital investment to operating expenditures. The increase in the surplus to 30 percent would add roughly Sk 220 million a year more. This would certainly improve the situation with respect to the WWA facilities, but would probably not allow for substantial expansion of sewerage networks or making up the deficits in wastewater treatment facilities. To get a much larger increase in capital investment to overcome these deficits, it would be necessary to leverage the net revenue surplus by borrowing.

#### *Need for Long Term Credit*

As mentioned above, the WS&W sector institutions will require access to credit in order to overcome the capital investment deficits, especially in the wastewater area.

There are a number of different models for providing such credit, ranging from a rather simple, one-time sector loan for wastewater facilities to a more elaborate infrastructure lending institution. While the exact form that such a credit program might take is not clear, foreign funding sources will obviously be required to capitalize it.

In addition to establishing a credit channel, it is necessary for the potential borrowers to develop credit-worthiness, whether they be individual municipalities or public authorities. The key to credit-worthiness is the ability to operate in a financially sound manner. In essence, WS&W authorities must be able to demonstrate that they can meet their operating costs from operating revenues and generate sufficient surpluses to fund capital investment in conjunction with reliable external support. This external support can come from dedicated central government transfers or funds contributed by local government.

#### *Financial Support for High Cost and/or Low Income Areas*

There are a number of areas where the cost of WS&W services are known to be high. In addition, there are regions of Slovakia where economic resources are not adequate to support high user fees or municipal contributions. Most likely, there will continue to be a need for well-targeted central-government support to the sector.

Whether this support should be grants or loans will depend primarily on the ability of the local communities to borrow and repay loans. Figure 2.18 presents a simple matrix diagram with

two dimensions—cost of service along one axis and level of local economic resources along the other. In areas where WS&W costs are low and economic resources high, there is little justification for grant support. At the other extreme, poor communities with high service costs should not be forced to borrow since they have limited ability to repay. The whole credit system tends to be undermined when loans are forced on local governments that are not credit-worthy. In such cases, repayment is not taken seriously.

		Level of Local Economic Resources	
		Low	High
Cost of Water and Sewer Services	High	GRANTS	
	Low		LOANS

**Figure 2.18**

**Decision Matrix for Selection of Grants vs. Loans for WS&W Investments**

It is clear that the municipalization of the WS&W sector will result in a number of local systems which will have trouble becoming financially self-sufficient. The central government must be prepared to deal with this eventuality and have clear policies for determining the level and type of financial support that will be available.

### *Strengthening Municipal Finances to Support the Sector*

It is likely that municipal governments will assume direct control of WS&S services and inherit the principal responsibility for financing these services. The financial analysis of current WWA operations indicates that overall WS&W operating costs should be recoverable from user fees and that some level of outside contribution will still be needed for meeting a large portion of the capital costs. Furthermore, there are a number of localities where operating costs are higher and operating cost support will be needed.

The principal concern of most municipal governments will be on financing the capital costs.

In many countries, local municipal governments either serve as the principal borrower for infrastructure loans or provide some guarantees for borrowing by a WS&W authority. Municipal governments have taxing powers and/or a claim on shared national taxes or formula grants. Any or all of these revenue sources may be used to back borrowing for WS&W sector investments, depending on the strength of the revenue flows being pledged. As noted earlier, Slovak municipal governments are not in a good position at present since their revenues are neither large nor predictable. To make them credit-worthy borrowers, the revenue authority of the Slovak municipalities must be increased and the revenue flows must be made steady.

The role of municipalities and the strengthening of municipal finances are critical to the success of the WS&W transformation. It will be virtually impossible for the WS&S sector to overcome current deficits in sewerage coverage and inadequate wastewater treatment without substantial loans for the sector. The WWA finances are not sufficiently strong to carry the debt burden without the backing of municipal governments.

Linkage between municipal government finances and WS&W services runs in both directions. In some localities where costs of water and sewer services are low, the takeover of WS&W services may be viewed by municipal officials as a financial windfall, particularly in cases where current cash flow is high. Experience from other countries suggests that in these cases, local officials may be tempted to siphon off excess cash flow and use it for other municipal purposes. This invariably leads to inadequate attention to capital investment needs in the WS&W facilities and long-term deterioration of the systems. It is critical that steps be taken to guard against this possibility, mainly by ensuring that a sufficient level of reserves be retained within any WS&W enterprise and that diversion of WS&W "profits" to other uses be tightly monitored.

## Chapter 3

# RESTRUCTURING THE WATER AND WASTEWATER SECTOR

This chapter discusses institutional issues involved in restructuring the water and wastewater sector. Interviews with mayors, WWA officials, and central ministry staff identified issues to be addressed and the range of perspectives for the restructuring plan. This chapter summarizes these issues and presents the option which supports the basic principles of the restructuring and which generally enjoys consensus backing of most of the actors.

### 3.1 Basic Principles

Eight basic principles for restructuring have emerged from the fieldwork. The WASH team believes that most parties would feel the restructuring plan should respect these principles.

#### *Continuity of Service*

The current system provides water in a fairly reliable way. No one wants the restructuring to result in a situation which provides poorer quality service.

#### *Flexibility*

The new system should permit variations from region to region and even within regions. It became apparent during the field visit that no single solution exists that will be appropriate for the entire country. Municipalities want the freedom to choose arrangements which suit their technical, financial, and institutional conditions.

#### *Municipally-based Solutions*

There is broad recognition that the new system should transfer ownership and responsibility to the municipalities for the provision of water supply and wastewater services. All parties agree that the infrastructure for water supply and wastewater should be transferred to the municipalities.

#### *Efficiency*

The new companies that emerge from the restructuring should be run in an efficient manner: they should take advantage of modern management techniques, increase the use of the private sector, reduce overstaffing, and improve their financial management. This type of management efficiency will keep costs under control and help in limiting future tariff increases.

### *Combined Responsibility for Water and Wastewater*

The provision of wastewater is more costly and technically more complex than the provision of drinking water. Combining these two services allows greater operational efficiency and the possibility of using internal cross-subsidies from water to wastewater.

### *National Budget Subsidies*

One goal to work toward is eliminating operating subsidies for all local water and sewer services. While some form of subsidy for capital investment may be continued, the amount and conditions need to be made clear.

### *Access to Capital Investment Funds*

In addition to limited state subsidies, local water and sewer service providers require access to a pool of funds for capital investment. In the near term, these funds can come only from foreign lending sources and will most certainly be made available in the form of loans to local governments and authorities.

### *Competition*

The restructuring is likely to result in the formation of a number of smaller companies. These companies will need access to a regional company (formed from the existing waterworks and sewerage authorities) offering contract operations and maintenances, specialized services, and engineering design expertise. These regional companies will be more efficient and competitive if the new configuration encourages and allows competition from private sector companies.

## **3.2 Issues to Address**

Despite agreement on the above principles, a number of issues remain which still need resolution before the restructuring can take place. Except for the final item in the list (payment for transfer of assets), all of these issues will have to be addressed before the restructuring can go into effect.

### *Wastewater Financing*

Currently, only 52 percent of the population is connected to public wastewater systems. In addition, many of the existing systems are in need of rehabilitation, and many cannot handle the volume of wastewater being generated and, as a result, discharge directly into rivers without any treatment. The financing needs are great, but grant funds available from the Environment Fund, coupled with capital investment funds from the Ministry of Soil Management, are inadequate. Under the existing system, municipalities do not have adequate revenue-raising authority to finance water and sewer investments. If municipalities are to

assume the main financial responsibility for WS&W services, then strengthening municipal finances will be key to increased investment in the wastewater sector.

### *Ownership of Transmission Lines*

Many municipalities are supplied water through common transmission lines. In Middle Slovakia, for example, approximately 70 percent of those served by the WWA are served through one large, interconnected system. Ownership of the transmission lines in such cases must be decided. The MSM is understandably reluctant to break apart the management of transmission lines. Two of the options to consider for ownership and management of a large common network of transmission lines are: 1) joint ownership of the transmission lines by the municipalities and state, with a common bulk water rate to all municipalities on that system; the state would continue to operate and maintain the transmission of the lines, to allow for greater cross-subsidies among municipalities and 2) form one bulk water company owned either by the state or by the state and municipalities, which would sell water to different regional companies at different rates (depending on distance and elevation).

In some cases, transmission lines are shared by a smaller number of municipalities, say 20 to 25. Those municipalities might own and operate the transmission lines in common, along with the water supply distribution and wastewater systems.

If the ownership and management of the transmission lines is transferred from the state to the municipalities or to a bulk water company, the state will continue to have an important role to play. One key role that the state will play is to ensure fair treatment to those municipalities currently not connected to the transmission lines. Another role for the state will be in the area of regulation, for example, reviewing bulk water rates, auditing finances, and monitoring water quality.

### *Ownership of Movable Assets*

Movable assets include heavy and specialized equipment that is needed for operations and maintenance activities as well as administration. This equipment is generally very costly, and the municipalities are concerned they will not be able to take responsibility for their systems if they are not given their fair share of the movable assets free of charge. Complicating the issue is the simple fact that there may not be enough of certain assets to provide to each municipality or regional company. In this case, some type of sharing arrangement will have to be worked out.

### *Access to Specialized Resources*

Over time the WWAs have acquired specialized equipment and developed specialized capabilities, such as laboratory services. In many cases, it makes sense to provide such services on a regional basis either because of the cost or the infrequent need. A system will need to be developed so these specialized resources can be accessed for a fee.

### *Design and Ownership of New WS&W Corporate Entities*

Much of the debate over restructuring the WS&S sector has centered on the new corporate structure(s)—who would own it and in what form. The main issues include: (a) Can municipalities establish non-profit corporations under existing Slovak commercial law? (b) Should the state continue to hold an ownership stake in local or regional authorities? (c) How should ownership be apportioned to municipalities that join regional authorities? (d) What should the rights and responsibilities be for those municipalities that do not currently have public WS&W systems? The form and ownership arrangements for the new water companies will have to be resolved since there are opposing interests and no good existing models within Slovakia that can be used.

### *Capability of Municipalities*

Although many municipalities believe they have the capability to manage their own water supply and sanitation systems, some of the municipalities and the WWAs believe that the current capability is not adequate. Although it was not possible to assess the capability of the municipalities in detail during the recent visit, it is probably safe to assume that they will require some capacity-building efforts as they assume greater responsibility. The municipalities interviewed intend to hire district staff from the WWAs. Although district-level staff are qualified in operations and maintenance, in general they will be less qualified in such areas as financial management, investment planning, and engineering design.

### *Unserved Communities*

Approximately one quarter of the population is currently not connected to a public water supply system. Almost one half of the population is not covered by any public wastewater system. A certain percentage (exact data were not available) of this population live in isolated areas or small villages where it is not financially and economically feasible to serve people through public systems. However, there are undoubtedly communities that are suitable candidates for public systems, especially wastewater treatment. It is important to ensure that these communities are included in future plans and not left to fend entirely for themselves.

### *Future of the Existing WWAs*

If the restructuring plan which is ultimately adopted gives responsibility to the municipalities, the four regional WWAs will no longer function as they have in the past. (The Bratislava WWA will continue to exist in its present form, serving only the city of Bratislava.) Depending on the final restructuring plan, the role of the regional WWAs is likely to include management of transmission lines, provision of contract operations and maintenance, and specialized engineering and support services. Creating six regional O&M companies instead of four has also been discussed. Whatever the final plan, the four regional WWAs will be transformed. Since these WWAs contain nearly all of the expertise in the water supply and wastewater sector, their new role and how they are restructured will require careful thought.



### *Payment for Transfer of Assets*

This issue has been discussed at some length in Chapter 2. In sum, the municipal governments' current low level of revenue authority indicates that they have no potential for paying for the transfer of assets. The only way this would be feasible is if the central increased financial transfers to the municipalities so they could then make payment back to the central government.

### **3.3 Restructuring Options**

Many options have been discussed over the past year. Three options in particular have been considered. The box below describes these options.

Options Considered for Restructuring

OPTION	RESPONSE
I. One national water and sewer company or a single holding company with regional subsidiaries.	Not acceptable to the municipalities
II. Formation of two joint stock companies, one in which ownership of all fixed assets is transferred to municipalities, and the other, owned by the state and the municipalities, which is responsible for operations and maintenance and all specialized services in their service areas.	Proposed by the existing WWAs; not acceptable to the municipalities
III. Municipalities would own and manage water supply and wastewater systems within their jurisdiction. A regional joint stock company would own and be responsible for management of the transmission lines.	Acceptable to the municipalities with some modification.

After extensive discussions with the municipalities and WWAs, one option seemed to emerge which respected the basic principles (Section 3.1) and responded to most of the concerns expressed by the municipalities and the WWAs (Section 3.2). It should be emphasized that the WASH team is not trying to promote one option over another. However, during the discussions it became clear that there was one option which came fairly close to satisfying the

concerns of all parties. This option combines elements of the various options which have been considered to date. Below are the essential elements.

- Ownership of infrastructure for water supply distribution and wastewater collection and treatment would be transferred to the municipalities.
- Each municipality would be responsible for deciding how it wants to arrange for water supply and wastewater services. Three basic scenarios are envisioned:

**Scenario 1:** Some municipalities, especially those that have independent systems (i.e., not connected to common transmission lines), will own and operate their own systems.

**Scenario 2:** Other municipalities, especially those that share a common transmission line, may form a smaller regional company to own and operate the system for all municipalities connected to it.

**Scenario 3:** Where many municipalities share common transmission lines, as in Middle Slovakia and East Slovakia, municipalities may decide to form several smaller regional companies from the common network to operate and manage the distribution systems. Ownership and operation of the transmission lines will be left to a joint stock company held by the state and municipalities.

In any of the three scenarios above, municipalities or smaller regional companies may decide to contract out the management of their systems.

- Unserved communities that fall within the newly configured service areas of the smaller regional companies would be offered a share in that regional company.
- Municipalities and smaller regional companies will hire staff from the existing WWAs to operate and maintain their systems.
- The existing WWAs will become regional companies offering contract operations and maintenance, engineering design, and specialized services. In cases where common transmission lines serve a significant percentage of the municipalities, these companies will also manage the transmission lines. These regional companies may be joint stock companies whose exact nature is yet to be determined. It is possible that more than four regional companies will be formed from the existing WWAs.
- Other qualified companies will be allowed to compete with regional companies in providing operations and maintenance or engineering services.
- Movable assets will be distributed free of charge to the municipalities or to associations of municipalities that will be formed for the management of water supply and wastewater services.
- Water and wastewater services will be combined in all cases.

Figures 3.1 and 3.2 show the current configuration of water supply transmission lines in Middle Slovakia and East Slovakia. Although these figures do not contain all the transmission lines, they do contain the major ones and illustrate the range of systems to be addressed in the restructuring.

Figure 3.1 depicts Middle Slovakia, where examples of all three scenarios discussed above can be found. Kremnica, an example of the first scenario, has its own source of water and would like to own and operate its system independently. The Previdza district is an example of the second scenario. This district, which consists of 52 municipalities, would like to own and operate everything—water supply distribution systems, transmission lines, and wastewater systems. Previdza is preparing a proposal to this effect. Figure 3.1 also depicts the third scenario, where a large system of transmission lines serves three or four districts.

The large system of transmission lines in Middle Slovakia currently serves 70 percent of the population in the geographic area covered by the WWA. The Zvolen district, for example, consists of 60 municipalities, of which 6 have 80 percent of the population in the district. The municipalities in this district would like to form a regional company responsible for water supply distribution and wastewater services. This new company would buy bulk water from the state but would not own or operate the transmission lines.

Figure 3.2 shows the main transmission network in Eastern Slovakia and also has examples of the same three scenarios. In East Slovakia a single system of transmission lines dominates the region, highlighting the critical importance of deciding on the issue of ownership and management of transmission lines. Spiske Vlachy is an example of a small municipality with its own water supply.

The consensus option discussed above creates a system in which each municipality determines how it wants to provide services. It respects the current technical conditions in that municipalities which share common transmission lines are allowed to join together to form a small regional company. It also carves out a clear role for the existing WWAs, one which provides contract operations and maintenance, specialized engineering and support services, and management of transmission lines when necessary.

This option also makes possible some degree of competition in managing WS&W services, since municipalities and municipally owned regional authorities can freely contract with the O&M companies for services. Individual O&M companies will be able to compete for contracts in any part of the country. Foreign companies might also enter the market.

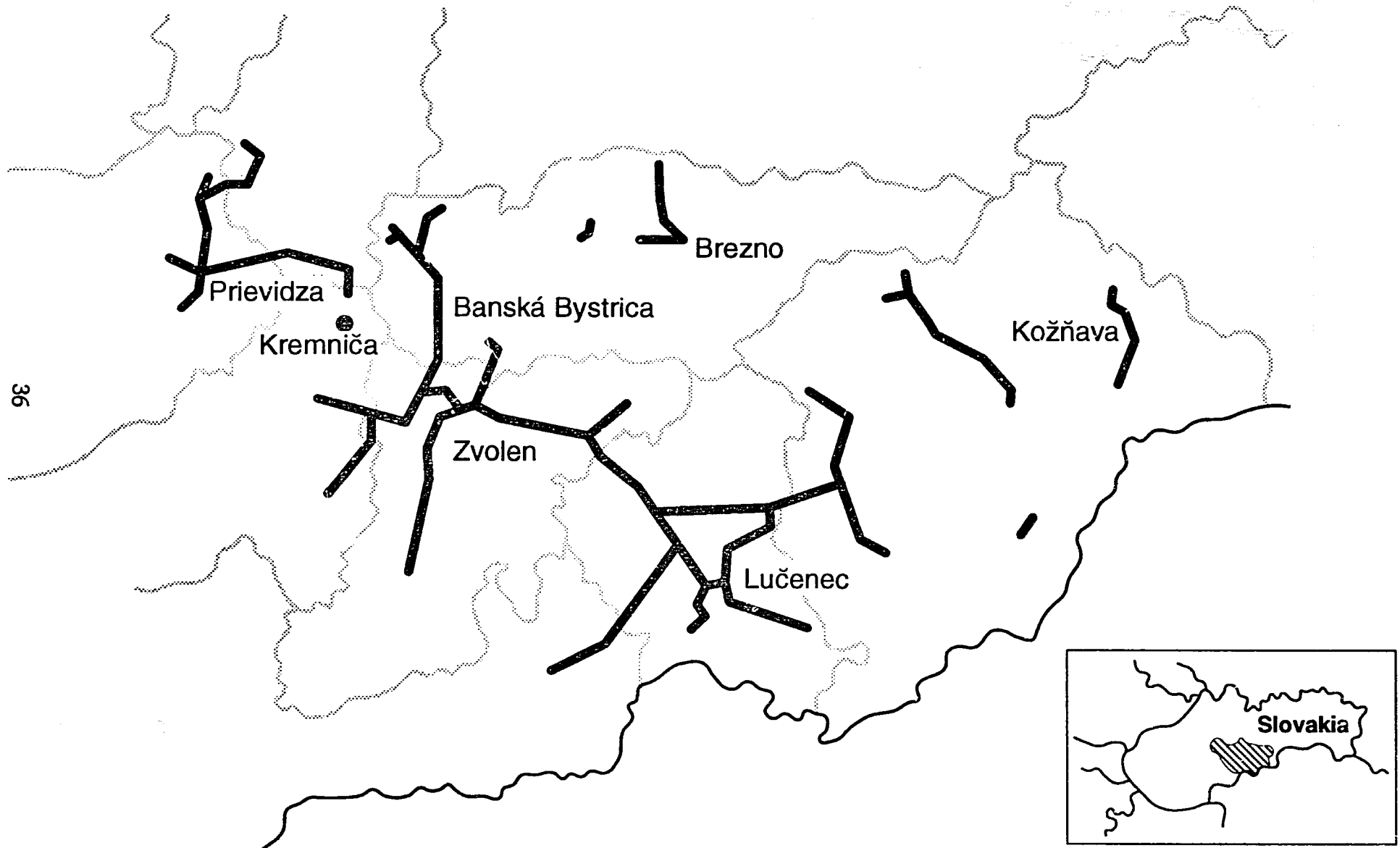


Figure 3.1. Middle Slovakia Water Supply Transmission Lines.

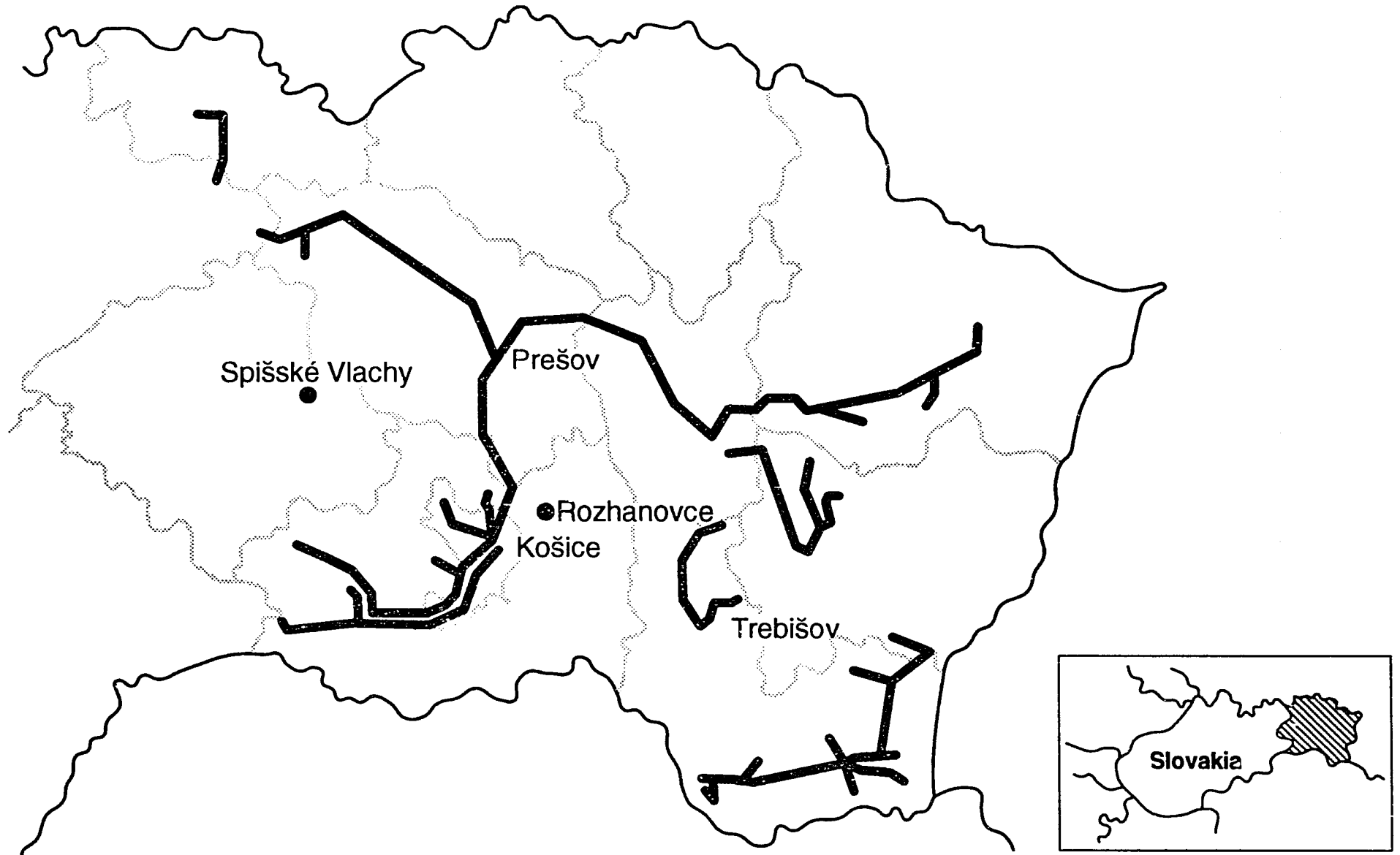


Figure 3.2. East Slovakia Water Supply Transmission Lines.

## Chapter 4

# RESTRUCTURING ACTION PLAN

### 4.1 Introduction

Once the restructuring plan is agreed upon and officially approved, a transition period of two years will be necessary. During this time, municipalities will be able to prepare for their new responsibilities, and existing WWAs will need to transform themselves into regional companies offering a range of operations and maintenance and engineering services. Without a well planned and implemented transition period, the restructuring is likely to result in disruption of services. Undoubtedly problems will arise regardless of the effectiveness of the transition period. Many of these problems, however, can be avoided with careful transitional planning.

The two-year transition period should start from the time the restructuring plan is agreed upon. The first 12 months should be a preparation period, at the end of which the new structure will actually go into effect. The next 12 months should be a start-up period for the new companies as they assume responsibility for the water and wastewater systems.

This chapter recommends actions for both the preparation and start-up periods. The preparation period suggestions are more specific and detailed. Towards the end of the first 12 months, it will be possible to develop a more detailed plan for the start-up phase.

### 4.2 Preparation Period

Five broad areas of activity are discussed below, each with various subtasks. A sixth section looks at reorganization of WWAs.

#### 4.2.1 Improve Efficiency of the Water and Sewer Companies

In order to limit future tariff increases and to generate surplus revenues for capital investment, the new water and sewer companies will need to keep costs under control, i.e., in both operations and maintenance and financial management. In the past, there were few incentives for improved efficiency. Finding ways to improve billings and collections and cash management will improve the financial position of the companies. On the service delivery side, increased emphasis on preventive maintenance and on modern operations and maintenance procedures will lower costs.

To get started in improving efficiency, a team of experts should undertake a detailed technical, financial, and management audit of two water and sewer districts to learn how the water companies currently operate and identify specific ways to make improvements. This will provide the baseline to develop training and technical assistance programs. Training programs

will be aimed at managers of water districts and municipal officials. The two districts should be selected to gather information which can be generalized to the rest of the country.

#### **4.2.2 Develop a Process to Assist the Municipalities in Making a Decision About What Option to Choose**

Many municipalities are not well informed about the restructuring of the water and sewer sector; some have only vague notions of what options have been discussed. If the restructuring concept suggested in Chapter 3, or some variation, is chosen, municipalities or groups of municipalities will have the following fundamental questions to answer:

- Will municipalities with an independent water system set up their own municipally run companies?
- Will neighboring municipalities connected to common transmission lines create regional association for water and sewer services?
- Will each association form a regional water and sewer operating company or will they contract out the operations and maintenance of their system?
- Will each association want to manage its transmission lines (assuming it is not connected to a large system of transmission lines) or will it want to contract out the management of the transmission lines?

Once these choices are made, the associations will have to address such questions as ownership of the fixed and moveable assets, staffing, and organizational structure. Municipalities will need access to information and assistance in making these choices. Materials need to be prepared and individuals trained to work directly with the municipalities. The individuals should work under the auspices of an independent organization, such as the Association of Towns and Cities. Donor assistance will be useful in developing the process for informing the municipalities and preparing the support materials.

#### **4.2.3 Develop Training Programs for Municipalities and for Future Water and Sewer Authority Personnel**

Two broad categories of people are likely to require training: those who will staff the water and sewer companies and municipal officials who will be responsible for overseeing the operations of the new companies. Initially the focus should be on senior and mid-level WS&W managers. Training will be needed in financial management and operations and maintenance. Training will be needed for municipal officials in tariff setting, investment planning, and the basics of water and sewer company operation. The municipalities need to be empowered so they can adequately represent the interests of the populations in their areas.

The training effort has several components:

- development of a comprehensive training plan based on the needs identified during the technical and financial audit.
- development of training materials, i.e., course materials and designs.
- training of trainers to deliver these courses.
- management of the training program including identification of participants, preparation of the training site, logistics, and financial management.

It is clear that a Slovakian organization needs to be identified to assume responsibility for this effort. External assistance should be provided to support the local organization.

#### **4.2.4 Develop an Ownership Plan for the New Arrangements**

Two ownership issues need to be addressed: (1) infrastructure for water supply distribution and wastewater collection and treatment and (2) transmission lines, especially where several companies are likely to share a common network.

The questions which must be answered include the following:

- Will these water and sewer companies be non-profit companies, as most believe they should be?
- How will the shares be divided? On the basis of population, or some other criteria?
- Will the state retain a percentage? If so, what percentage?

This effort is likely to require establishment of a legal framework in which the companies can operate. It appears that there is currently no legal framework in Slovakia for a non-profit company which generates surplus revenues but does not pay dividends (retaining the surplus for capital investments).

To work out the details of the ownership arrangements, an expert with extensive experience in this area should be identified. This expert should also be responsible for drafting protocols for the different ownership scenarios. This activity will require legal expertise from Slovakia.

#### **4.2.5 Establish a Mechanism for Capital Financing**

Establishing a mechanism for capital financing of water and wastewater infrastructure is essential if the unmet needs are to be addressed. In various countries, a range of mechanisms have been used, such as the establishment of a municipal infrastructure bank or a low-interest loan program. The capital financing system must address not only loans for those municipalities which can afford them, but also a system for grants for poorer communities.



Many of these are being discussed in Slovakia, and one option, the use of a revolving fund, has already attracted the attention of foreign donors. Outside assistance could be beneficial in this effort, but it would be more useful after the government decides to establish a system for capital financing.

#### **4.2.6 Reorganize the Existing WWAs**

The existing WWAs will lose much of their operating staff to the new regional water and sewer companies. They will continue to provide operations and maintenance and engineering services on a contract basis, perhaps with competition from the private sector. This new role will require reorganization of the existing WWAs, for streamlined, cost effective operation to compete effectively with private sector groups. In their transition, the WWAs may request foreign assistance from individuals familiar with similar O&M companies.

### **4.3 Start-up Period**

By the beginning of the start-up period (the second 12 months), the following changes will hopefully have been accomplished:

- Municipalities will know what their future arrangement is for water and sewer services. They will have decided whether they want to operate the system themselves or contract out the operations and maintenance.
- Ownership agreements will be signed and in effect.
- Staff will be reallocated to new companies.
- Most senior managers and some mid-level staff will have been trained.
- Existing WWAs will have been reorganized and will have adequate staffing levels to provide the services requested by the municipalities.
- Movable assets will have been reallocated to the new companies.
- A decision will have been reached on a capital financing mechanism.

The start-up period will consist primarily of three components.

#### *Technical Assistance*

The technical assistance component will continue to provide targeted help to the new companies as they adjust to their new responsibilities. It is unrealistic to expect that the new companies will be able to manage the systems with no outside assistance. A local organization, either governmental or nongovernmental, should be responsible for providing this technical assistance.

### *Training*

The training component will be a continuation of what was set up during the preparation phase. The preparation phase should target senior managers of the new companies, and the start-up phase should focus on mid-level staff and, to the extent feasible, operator staff.

### *Capital Financing Mechanism*

The capital financing mechanism is unlikely to be in place by the beginning of the start-up period. If a decision regarding the nature of the mechanism has been reached, assistance could be provided in actually establishing the mechanism.

Although a 12-month period is suggested for the start-up period, start-up is likely to continue for several years. Some municipalities will quickly gain the experience necessary to run their systems efficiently. Other will require assistance over a longer period of time.

## **4.4 Monitoring the Restructuring Program**

Making the restructuring successful will require a concerted, well-planned preparation and start-up period. External donor assistance will be required to fund the technical assistance and to provide access to outside experts. No matter how well planned the transition period is, however, there will still be problems. The central government has an important role to play in monitoring of the restructuring program to make sure that problem areas are addressed. At least for the next several years, a small unit within the Ministry of Soil Management might be formed to carry out this monitoring and coordinate the efforts of donor and Slovakian organizations. This unit should establish a monitoring process to collect and analyze data to track performance. These data should include both macro-level data, such as percentage of people served and staffing ratios, and data on water authority performance, such as unaccounted-for-water, operating revenues, and debt service as a percent of operating revenues. This information will allow the unit to identify companies in need of assistance.

Although the Ministry of Soil Management appears to be the logical candidate for taking the lead responsibility for monitoring, other institutions affected by the decentralization, such as the Ministries of Finance, Environment, and Privatization, should also be involved.

## **4.5 Role of External Assistance**

The action plan will require external assistance. Expert assistance will be required in each of the six areas discussed in Section 4.2, with the possible exception of the reorganization of existing WWAs. In addition, external funding will be needed to support a local organization to help the municipalities make an informed decision about the new arrangements and to provide training and technical assistance. No existing Slovak organization has sufficient resources to fund the cost of training and technical assistance; outside financial resources will be needed for these activities over a two-year period.

## **4.6 Conclusions**

Restructuring the water and sewer sector is an enormous undertaking. The risks involved have understandably given pause to those who are experienced in managing the existing WWAs. Nevertheless, there is widespread agreement in Slovakia that the municipalities should own the infrastructure and that this ownership can lead to a high level of responsibility for managing the system.

The government of Slovakia has followed a careful and deliberate process to decide on the form that restructuring will take, involving all of the key interest groups in the discussion. This process has yielded an emerging consensus on the form that the new structure should take. However, there still remains a great deal of work in resolving key issues and in assisting key agencies in the implementation. Once the main policy decisions are finalized, the task of putting the new structure in place still remains. A careful program of assistance will reduce the problems and increase the chances for long-term success.

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