

F I E L D R E P O R T

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RECOMMENDED OPTION FOR DECENTRALIZING  
THE WATER AND WASTEWATER SECTOR  
IN SLOVAKIA

WASH Field Report No. 444  
July 1994

**WATER AND  
SANITATION for  
HEALTH  
PROJECT**

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

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IN SLOVAKIA**

Prepared for the Bureau for  
Europe and Newly Independent States  
U.S. Agency for International Development  
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by

James S. McCullough  
Fred Rosensweig  
Kennedy Shaw  
and  
Broy Riha

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## ABOUT THE AUTHORS

James S. McCullough is Chief Scientist for International Development at the Research Triangle Institute (RTI), North Carolina. Formerly, he served as Director, RTI Office for International Programs and Chief of Party of the Municipal Finance Project in Indonesia for USAID. His main areas of expertise include urban policy, management training, finance legislation, local revenue generation, financial management, and the design of municipal loan funds. He has worked in a number of developing countries in Asia, the Middle East, and Africa. Dr. McCullough has published widely on aspects of municipal finance and is the author of the "Municipal Finance Analysis Handbook." He also holds an appointment, Department of City and Regional Planning, University of North Carolina at Chapel Hill.

Fred Rosensweig has been the Associate Director for Human Resources and Institutional Development for the WASH Project since 1981 and a vice president of Training Resources Group since 1984. His expertise includes the organization of the water and sanitation sector, design of institutional strengthening programs, development of training plans and systems, and design and delivery of workshops. He has lived overseas in Senegal, Cameroon, and Tunisia and has carried out short-term technical assistance in more than 30 countries in Europe, Latin America, and Africa. Mr. Rosensweig is fluent in French.

Kennedy Shaw is a senior municipal management specialist with RTI. He served as a city manager for more than 20 years and also served as the executive director of the Massachusetts Municipal Management Association. He is a full member and past regional vice president of the International City/County Management Association. In addition, he served as a member of the Board of Directors of the National League of Cities and is a past president of the New Jersey Municipal Management Association. He has worked as a consultant to more than 50 municipal, county, and state governments in six states as well as eight foreign countries.

Broy Riha, P.E., is a senior municipal engineer in independent consultant practice. He was the Director of Public Works for Santa Rosa, California, from 1961 to 1986. Since leaving that job, he has worked as a consulting engineer on several construction management projects. Since 1990, he has worked in a number of U.S. territories in the Pacific and Caribbean improving the operational efficiency of water supply and wastewater organizations. He is a past president of the California State Association of Municipal Engineers.

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## ACRONYMS

GOS	Government of Slovakia
MSM	Ministry of Soil Management
RBA	River Basin Authority
RTI	Research Triangle Institute
STVAK	Central Slovakia Water and Wastewater Authority (Slovak acronym)
UFW	unaccounted-for-water
USAID	U.S Agency for International Development
WASH	Water and Sanitation for Health Project
WTP	water treatment plant
WWTP	wastewater treatment plant
ZMOS	Association of Towns and Cities (Slovak acronym)

## SUMMARY OF RECOMMENDATIONS

Over the past nine months, the WASH Project has carried out five activities to assist the Government of Slovakia (GOS) in determining the best option for decentralizing water and wastewater services. These activities have involved extensive data collection and discussions with central ministry officials, water and wastewater authority staff, Association of Towns and Cities (ZMOS) staff, and municipal officials—all of the key interested parties. With the submission of the draft Water Sector Policy Concept to Parliament by the Ministry of Soil Management (MSM) in late May 1994, the government is moving closer to a final decision on how to restructure the sector. Because the government will probably make a decision within the next few months, WASH believes that now is the time to review the findings of the five activities and draw conclusions so that they can be considered. Below are 10 major recommendations for the GOS.

1. **Adopt a flexible approach towards restructuring, relying primarily on the formation of small regional water and wastewater companies.** The government needs to actively encourage the formation of financially and technically viable smaller regional companies to avoid the atomization of the system (i.e. breaking up into single municipal systems). These regional companies, wherever possible, should also manage their bulk water systems, including major water sources and transmission lines. In West Slovakia and East Slovakia, where there are long transmission lines fed from one or two major sources, it may be necessary to form regional transmission line companies that are wholly accountable to the smaller regional companies they serve.

Smaller regional companies will provide increased efficiency, more local control, and a stronger financial base. Some municipalities not connected to any main transmission lines might elect to manage their systems independently. The intent of this approach is to significantly increase municipal control and create the conditions for water companies to operate on a commercial basis.

2. **Educate the municipalities.** The municipalities are not well informed about the restructuring efforts. Most have a limited understanding of the management of water and wastewater services. They are completely unprepared for the transformation, and most will be taken by surprise unless they are educated about the coming changes. ZMOS is the logical organization to take responsibility for this process, but it will require outside technical assistance.
3. **Provide information to the municipalities.** The municipalities have very little data on their current operating costs for water and wastewater services. The regional water and wastewater authorities need to provide accurate financial and technical data before transformation occurs so that the municipalities can make an informed decision on how to manage their water and wastewater systems. The municipalities will be able to understand and use the data only if they understand the restructuring efforts.

4. **Involve the municipalities in the development of transformation proposals.** The starting point for restructuring should be the municipalities. Once the municipalities have a better understanding of the overall restructuring effort and their specific situation, they will be in a better position to participate in the development of transformation proposals. The development of these proposals will obviously require the assistance of the regional authorities, but the municipalities must be actively involved.

5. **Form a broad-based national committee to review transformation proposals.** The government should form a national committee to review transformation proposals. The current proposal calls for the regional authorities to develop and submit these proposals. The competitive transformation proposals prepared by the municipalities should be submitted to the regional authorities, which should in turn submit all of them to the national committee. The purpose of this committee is to ensure that water resources are shared equitably, that municipalities are not excluded, and that the proposed new companies are financially and technically viable.

The municipalities should actively participate in this committee, which should also include representatives from the Ministries of Soil Management (including the concerned regional water and wastewater authority), Environment, Privatization, Finance, and the Slovak Anti-monopoly Office. It is critical that the review of proposals follow clear objective criteria. The timetable for submitting transformation proposals should allow adequate time for the municipalities to become educated about the restructuring and informed about their specific water and wastewater systems. Rushing the process may cause the municipalities to submit proposals that do not have the necessary input.

6. **Modify draft proposal for restructuring that will be submitted to Parliament.** The MSM should make major modifications in the draft proposal submitted to Parliament. The draft proposal effectively ties the hands of the municipalities by not transferring the operational assets (such as laboratories, heavy equipment, and vehicles) free of charge. The proposal limits the municipalities' choices. The only real choice the MSM draft proposal permits is for the municipalities to form regional companies and contract those who are able to purchase the operational assets to manage the system. In addition, by forming six 100-percent state-owned regional transmission line companies to manage the water source works, pumping stations, water treatment lines, and transmission lines, the municipalities will have very little control over the total cost of water services. The critical elements of the system will remain under state control. It appears that only two regional transmission line companies will be necessary, one each for East and West Slovakia.

7. **Put in place the necessary legal structures.** The government needs to put in place the legal structures for a nonprofit corporation that is the basic model for a municipally owned regional authority. All the water companies should initially be structured as public companies that can generate revenues that exceed their operating costs. However, these costs must be used either for debt servicing or financing new capital projects and not for any other purpose. It is possible these public companies could eventually be privatized, but it is not realistic to expect this to happen for a long time.

8. **Allow each operating company to determine tariff rates.** Tariffs should reflect the actual cost of water, and individual authorities must have the autonomy to determine their cost recovery structure and set tariff rates. Adherence to a uniform tariff structure is one of the least efficient means of guaranteeing adequate access and affordability, and other methods such as “lifeline rates” should be considered.
9. **Revamp the bulk water charge system.** Surface water supplied to water authorities from reservoirs is under the control of River Basin Authorities (RBAs) and is priced according to the financing needs of the RBAs, not the actual cost of supplying the water. This results in large price discrepancies. At the same time, the GOS may consider applying a severance tax on water use uniformly in order to raise desperately needed funds for capital investment for the sector.
10. **Selectively target the limited funds available for capital investment.** Capital investment funds should be made available to complete high-priority wastewater projects and to improve operating performance in water systems, particularly to reduce the high levels of unaccounted-for-water (UFW).

## **Chapter 1**

### **INTRODUCTION**

#### **1.1 Overview**

This report recommends an approach for the Government of Slovakia (GOS) to decentralize its water and wastewater services and a course of action for its implementation. The recommendation is based on the results of five activities undertaken by the Water and Sanitation for Health (WASH) Project over the past nine months. The purpose of these activities was to assist the Ministry of Soil Management (MSM) in deciding how to decentralize its services to the local level.

The initial WASH activity focused primarily on the national level, aggregating data from all five authorities and suggesting a broad approach towards restructuring. The three subsequent WASH activities focused in detail on the operations in two districts and one region, and the final activity focused on the municipal level. This report integrates the conclusions of these five activities along with the experience that WASH acquired. This report is not intended to repeat what was included in the previous WASH reports but to draw conclusions on the most appropriate option for decentralization, based on cumulative experience, and to offer specific suggestions on what is required to implement it.

The five activities to date have been carried out by a team of five U.S. consultants working in close association with Slovak consultants. The continuity provided by using the same U.S. and Slovak consultants has allowed the sharing of information and insights and an increasingly in-depth analysis.

#### **1.2. Background**

Since the initial WASH activity in fall 1993, the GOS has continued discussions on the decentralization of the water and wastewater sector. Participants in these discussions have included central government ministries, the regional water and wastewater authorities, and the national Association of Towns and Cities (ZMOS). The discussions culminated in May 1994 with the MSM submitting a Water Sector Policy Concept (described in Section 3.1) to Parliament. Although Parliament approved the concept as a whole, it requested the MSM to modify the concept based on its comments and changes. These comments included the need to transfer of assets free of charge to municipalities and the management of the transmission lines and River Basin Authorities (RBAs). The current schedule calls for the MSM to submit the proposal on restructuring in August with the GOS to make a final decision by the end of August. The MSM proposal calls for implementation of the restructuring in the second half of 1995.

### **1.3 WASH Project Involvement**

Beginning in September 1993, the WASH Project initiated an effort to help key Slovakian decision makers identify and evaluate alternative options for restructuring the water and wastewater service delivery institutions. The team assembled a sizable information base on current operations of the existing sector institutions, including data on financial performance of the five water and wastewater authorities, capital financing flows, and municipal finances. The team also interviewed municipal officials and staff of the water and wastewater authorities to understand local circumstances. The WASH team discovered that there was no clear model that would fit the needs of the various interest groups. Instead what emerged was a solution allowing individual municipal governments wide flexibility in choosing the type of service delivery arrangements that would best fit their circumstances. The team presented its findings at a workshop in Bratislava in November 1993.

One of the recommendations for follow-up was to study two water and wastewater districts in detail to learn how they operate and to identify ways to make short-term improvements in efficiency. In February 1994, a three-person WASH team reviewed the management of the West Slovakia Transmission Line district and the Prievidza district of the Central Slovakia Water and Wastewater Authority (STVAK). More importantly, the review of the two districts put WASH in a better position to comment on the current technical, financial, and management performance of the existing service delivery institutions and to better understand the issues at the district level. The audit determined that the two districts are essentially well managed and technically proficient but that neither is sufficiently oriented towards operating as a business. In both cases, the WASH consultants concluded that the current institutional set-up and financial policies do not provide the right incentives for the authorities and their districts to have a commercial orientation.

The February 1994 management review of the Prievidza District recommended a pilot study to determine possible service area boundaries based on financial and technical factors. WASH received permission to study the STVAK as an example of a representative region. Preliminary information received from the Authority during the management review indicated a wide disparity in the economic viability of the seven operating districts within its boundaries. The boundaries study was carried out in May 1994. The WASH team held extensive interviews with the director, operations manager, and financial manager of each district as well as the director and financial director of the Hron RBA. The team also collected extensive data on the technical and financial operations of each district. The key data from the study are summarized in Chapter 2. The study concluded that it was financially and technically feasible to divide the Authority into three or four smaller regional companies.

In May 1994, a WASH team conducted a strategic planning workshop for the Prievidza water and wastewater district as follow-up to the management review. This activity provided an understanding of what may be required for similar water and wastewater districts in Slovakia as they begin to prepare for decentralization. Specifically, this activity identified a range of issues applicable to other districts—setting a tariff based on actual costs, reducing water loss

to provide cost savings, implementing cost center approaches to enhance accountability, dealing with unpaid debt from public institutions (schools, hospitals, and government offices), and improving management's ability to run the water company like a business.

In June 1994, WASH conducted the last activity, which involved working directly with two local municipal associations, one in Prievidza and the other in the districts of Lucenec, Rimavska Sobota, and Velky Krtis. In each area, the WASH consultants interviewed municipal officials and conducted a one-day workshop. The purpose of the workshops was to educate the mayors about the coming changes and, more importantly, to understand the municipal officials' perspective so that the key training and technical support needs could be identified.

#### **1.4 Organization of the Report**

The report is organized into four chapters. Chapter 1 is this introduction. Chapter 2 summarizes the main technical, financial, and institutional problems or issues that must be addressed by whatever decentralization option is selected. Chapter 3 reviews five options that have been discussed and recommends those options that best address the key issues. Chapter 4 suggests specific actions that will be required to implement the chosen option. In addition to the main body of the report, a summary of recommendations is provided for easy reference by decision makers.

## Chapter 2

### KEY FACTORS IN RESTRUCTURING

This chapter analyzes the key institutional, financial, and technical factors that affect the restructuring. It draws heavily on the WASH teams' recent work in the Central Region, which permits an examination of the restructuring options compared with that region. The analysis of the Central Region has been invaluable, not only for evaluating the options, but also for identifying the data requirements for making informed decisions. Appendix A provides a summary of the data that municipalities will need to participate in the development of transformation proposals.

#### 2.1 Institutional Factors

There are a number of important institutional factors that affect the process of restructuring the water and sewer services as well as the resulting nature of the restructured authorities. The following section briefly presents the most salient institutional factors.

**The municipal officials have very limited knowledge of how local water and sewer companies should operate and, in most cases, are not closely involved in discussions of the restructuring in their own localities.**

Municipal officials, in general, are not well informed about the basics of how water and sewer companies operate, particularly the financial aspects. For example, few mayors have data on the actual cost of providing water and sewer services to their towns, although they are already mandated by law to assume responsibility for these services. Although ZMOS formed a committee to provide inputs to the restructuring debate at the national level, information on key policy issues is not communicated quickly or fully to the network of local mayors. Moreover, the national debate thus far has focused on a narrow range of issues, namely whether the water and sewer assets would be transferred free of charge to the municipalities. As noted in earlier WASH reports, this is not an issue since municipalities could not possibly afford to pay for the assets transfer under any circumstances. In effect, this "issue" has diverted attention away from the many other substantive issues that must be addressed.

The Prievidza District of STVAK provides an exception to this finding, insofar as the mayors of municipalities in the district have met several times to discuss forming a regional company. However, the details of the regional organization have not been worked out, and there remain a number of critical issues that have yet to be confronted, such as the apportionment of representation by individual municipalities or the governing structure of the regional company.

In order for the municipalities to meaningfully participate in the development of transformation proposals, they will require an overall understanding of the restructuring effort and specific information about the water and wastewater systems in their towns. Only then will they have the ability to engage in discussions about water and wastewater services.

**The national committee proposed by MSM to review water and sewer “privatization” proposals does not specify the role of the municipalities in reviewing proposals.**

The MSM presented a draft policy statement in May 1994 that offers no role for representatives of municipal government in the proposed committee to review the “privatization” proposals. This oversight means that the committee will lack the critical viewpoint of the local governments and may bias the selection process in favor of proposals from the existing water and sewer authorities.

**There is a lack of Slovakian prototypes of municipally based local water and sewer authorities and accompanying legal reforms.**

A major drawback to the restructuring process is the absence of models of local water and sewer companies, particularly regional public authorities, covering several, or many, municipalities. This means that municipalities (and the MSM) have no ready points of reference for deliberations on the nature of municipal-based local water and sewer authorities. A further problem is the absence, in the Slovak Commercial Code, of a nonprofit corporation—the typical model employed in the United States for operating such a regional public enterprise. Such a model needs to be created and given legal standing.

Of particular concern is that municipally owned regional authorities have the stability and adequate autonomy to allow them to be run as a business including, among other things, having access to long-term credit. There are a number of excellent examples of municipally based local water/sewer authorities in western Europe and the United States that could serve as the basis for developing appropriate Slovak prototypes. Founding documents, operating procedures, and even case studies could be readily provided for translation into Slovakian. Appendix B contains a summary of the Slovakian laws most relevant to restructuring the water and wastewater sector.

**In the formation of smaller regional companies, the needs of municipalities that do not have existing public water or sewer networks must be considered.**

Almost all of the current discussion on restructuring has necessarily focused on treatment of the existing systems, with not much attention on the communities that have no existing public services. This is a major policy issue since about one quarter of the Slovak population is not connected to a public water system and almost one half is not connected to a public sewer system. The concern is that when new water and sewer companies are formed, they will be given the mandate to cover municipalities who are not now served.

This, in turn, will have an impact on the "ownership" of the regional authorities as well as on their financial viability.

**The size of the new municipally based authorities will have an impact on costs, financial viability, and responsiveness to municipal control.**

While there is no ideal size for a water and sewer authority, it must be sufficient to operate effectively. On the other hand, it is clear from an examination of the operations of the existing five regional waterworks and sewer authorities under state ownership that a large authority may have excessive overhead costs and lack responsiveness to individual localities.<sup>1</sup>

Size affects uniformity of water tariffs in that, the larger the customer base, the more uniform the authority's costs and hence the more uniform the tariffs become. While there seems to be a strong sentiment for keeping tariffs uniform across Slovakia, there are a number of reasons as discussed under Section 2.2, why such uniformity is not a good idea.

**The restructuring will increase the municipalities' responsibility to finance new capital investments and, in turn, require strengthening the general financial condition of municipal governments.**

It is well documented that Slovakia has a significant backlog in capital investment in the water and sewer sector, particularly in the coverage of sewerage networks and in the availability and operating state of wastewater treatment plants.<sup>2</sup> In addition, WASH Field Report No. 433 documents the current level of underinvestment in the sector and shows how the backlog has accumulated over the recent past. Furthermore, anecdotal data from the STVAK districts coupled with officially reported high levels of unaccounted-for-water (UFW) indicate significant deterioration of the water supply network, which will require an undetermined amount of rehabilitation and replacement. Given that central government funding for the sector is shrinking rather than rising, it is likely that municipalities will have to provide some support for capital investment for the sector. This support may be through direct contributions from municipal budgets or guarantees for loans to municipally owned water authorities.

Unfortunately, Slovak municipalities currently have limited financial resources, and recent changes to local taxing authorities are not likely to provide significantly larger revenue yields. This means that the municipalities will require substantially increased local revenue-generating authority if they are to assume any financing role in the water and sewer sector.

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<sup>1</sup> See WASH Field Report No. 433, *Decentralization of the Water and Wastewater Sector in Slovakia*, February 1994. Chapter 2.

<sup>2</sup> See the body of reports prepared for the separate Danube tributary basins in Slovakia under the Danube Basin Environmental Programme.

As regional water/sewer companies are formed, the exact role of individual municipalities in supporting their capital investment will have to be determined. Will the municipal owners of a regional company assume joint liability for loans for specific projects (e.g., a wastewater treatment plant serving a subset of municipalities in the region), or will the affected municipalities assume the burden?

**The restructuring will require greater autonomy in all aspects of running the water and sewer companies, including tariff rates, staffing decisions, and new investment planning.**

The water and sewer companies that emerge from the restructuring will aim for financial viability so that they are free to pursue a commercially oriented service mandate. This does not mean that they are free from regulation; however, they must be free from unwarranted interference. At a minimum, they must be able to set tariffs within reasonable limits, make staffing decisions based on need and qualifications, and make financially sound investment decisions that contribute to the company's service delivery mandate. Municipal officials are concerned that they will not be allowed sufficient autonomy in these decisions.

## **2.2 Economic and Financial Factors**

The economic and financial issues relate to how the restructured water and sewer companies will achieve financial viability. This does not mean that they will be financially self-sufficient in recovering all of their operating and capital costs from user charges. Rather, it means that, in the near term, they will be able to cover their operating costs from user charges and, in the long term, they will cover their capital costs from a stable combination of user fees, local municipal contributions, and central government grants and loans.

The following presents the major economic and financial factors in achieving financial viability of municipally based water and sewer authorities.

**Cost factors vary a great deal, especially those that currently affect the cost/price of bulk water.**

The cost of water supply to any given service area is a function of three main factors:<sup>3</sup>

- Price charged for surface water supplied from RBA reservoirs;
- Treatment costs; and
- Distribution system costs.

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<sup>3</sup> Efficient management of the water/sewer enterprise is also a factor in cost and is manifest in such indicators as UFW. This is related not only to operations and maintenance, but also to management of the whole process starting with project design, construction, and construction supervision. These internal management issues have been the focus of a pilot WASH training activity with the Prievidza District office of STVAK conducted in May 1994.

An analysis of the data from the STVAK shows how the first two items account for great differences among the seven service districts of STVAK. Water in the STVAK area is obtained from boreholes and springs, from four reservoirs belonging to the Hron RBA (Klenovec, Malinec, Hrinova, and Rozgrund), and from one reservoir (Turcek) belonging to the Vah RBA. Rarely does the water from the boreholes and springs require treatment other than chlorination, while the reservoir water always does. In addition, the RBAs charge significant amounts for the water obtained from their surface water intakes (1.9 SK/cm for the Hron RBA and .5 SK/cm currently for the Vah RBA). There is no charge for groundwater obtained directly by the water authority. The reservoir water is more likely to require pumping for its delivery while the ground water often does not.

Table 1 shows the widely varying rates the STVAK Transmission District charged for water delivered to the operating districts in 1994.<sup>4</sup> There are several important points contained in Table 1. First, the computed bulk water charge for several of the districts is above the residential tariff cap of Sk4 per cubic meter, meaning that these districts will lose money for every cubic meter sold to a residential customer. Second, the charge per meter for surface water supplied by the RBAs differs greatly between the Vah RBA and the Hron RBA. The explanation is simple: the Vah RBA has more extensive sources of income and is not forced to charge the maximum price to the STVAK; the Hron RBA is in a much tighter financial situation and thus charges the maximum to STVAK. This means that the surface water charge is not based on the actual cost of providing that water but on the financial needs of the supplying RBA.

In order to rationalize water pricing, it is important that the RBAs charge actual costs of water sold to the water companies. This may be difficult since some of the reservoirs are multipurpose, but it should be done to provide true accounting of water costs. It may also clarify where reservoir development is not justified on economic grounds.

Distribution costs vary among districts primarily because of the length of pipelines and pumping costs. Districts with widely scattered populations have high network costs; for example, in the STVAK region, the districts of Velky Krtis, Ziar nad Hronom, and Rimavska Sobota have the longest pipe networks per customer and also the highest distribution cost per meter of water sold.

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<sup>4</sup> Although the STVAK does not operate on a "cost center" basis and hence does not report actual bulk water costs for water delivered to the individual operating districts, the STVAK Finance Department provided these calculations to the WASH team in order to permit these analyses.

**TABLE 1**  
**1994 ESTIMATED RATES FOR WATER DELIVERED BY THE**  
**STVAK TRANSMISSION DISTRICT**

Source of Water	Delivery Point	Cost/cm	RBA Cost/cm Included
Banska Bystrica Springs	Banska Bystrica	.9SK	-
Banska Bystrica Springs	Zvolen	.9SK	-
Banska Bystrica Springs	Ziar nad Hronom	.9SK	-
Turcek Surface Water Intake	Prievidza	3.0SK	.5SK
Turcek Surface Water Intake	Ziar nad Hronom	4.2SK	.5SK
Hrinova Reservoir	Lucenec	4.4SK	1.9SK
Hrinova Reservoir	Velky Krtis	4.4SK	1.9SK
Hrinova Reservoir	Zvolen	4.4SK	1.9SK
Kienovec Reservoir	Lucenec	3.2SK	1.9SK

Note: The Vah RBA currently charges only .5 SK/cm for water taken from the Turcek Reservoir. The current law permits a maximum charge of 1.9 SK/cm, and it is likely that the charge will rise to that figure following the completion of the new reservoir. Such an increase will place the Prievidza District in a deficit position.

**Cost recovery is hampered by several key factors beyond the control of local water authorities.**

The STVAK is constrained by two factors that, when combined, dictate how much revenue it can generate from water user charges:

- The price cap of SK4 per cubic meter from residential customers
- The proportion of water sold to residential versus industrial customers.

The nationally imposed cap of 4 SK/m<sup>3</sup> of residential water tends to distort the financial impact of a high percentage of residential water use in particular districts. The RBA is permitted to establish its own rate structure for non-residential users including industries, institutions, and agriculture. All the authorities raise the rates for non-residential users in order to limit financial losses. It is therefore not surprising to see that the Velky Krtis and the Ziar nad Hronom operating districts, which have the two largest residential percentages of water invoiced (67.3 percent and 71.3 percent, respectively), are among the districts

with high operating deficits. Table 2 presents a comparison of the percentages of residential water billed in the seven operating districts in the STVAK region.

**TABLE 2**  
**1992-1993 PERCENTAGES OF WATER INVOICED FOR RESIDENTIAL CUSTOMERS**  
**FOR THE SEVEN OPERATING DISTRICTS IN THE STVAK**

DISTRICT	PERCENTAGE OF RESIDENTIAL WATER INVOICED
	1993
01 - Banska Bystrica	54.9
02 - Lucenec	61.1
03 - Prievidza	61.9
04 - Rimavska Sobota	55.6
05 - Velky Krtis	67.2
06 - Zvolen	54.4
07 - Ziar nad Hronom	70.9
Authority Average	59.4

It is clear that as long as local water authorities have an externally imposed tariff cap, many will not be able to achieve financial viability. It is also clear that the use of a uniform tariff structure limits their ability to price their services to meet local conditions. Many officials, both at the national and local levels, support the continuation of a uniform tariff for residential customers on the assumption that a (low) uniform tariff makes water affordable to all citizens. This is true in a limited sense, but it is also true that a uniform residential tariff (cross subsidized from industry) provides a subsidy to all users regardless of income. Furthermore, the subsidy is greatest to those who use the most water since the tariff is priced uniformly.

It is questionable whether industry should be charged higher tariffs in order to subsidize residential consumption. This is particularly an issue because Slovak industry is struggling financially. There are other tariff schemes that provide better targeting of the subsidies, such as the increasing block rate (progressive) tariff with a low initial charge for a minimum

amount of water—the so-called “lifeline rate.” In addition, local water authorities can apply differing cost recovery structures to recover some of the capital costs from direct charges for service availability and connection fees. In summary, the new local companies should benefit from access to a wide selection of tariff structures and the freedom to set tariff rates in response to the financial needs of the authority.

**Differing cost profiles coupled with the uniform tariff cap produce great differences in the profitability, or financial viability, of regional water and sewer companies.**

It should be clear from the preceding discussion of costs and pricing of water and sewer services that the financial viability of local authorities will be dependent on resolving several key issues, namely eliminating the price cap and uniform tariff structure and rationalizing the price of bulk water. To illustrate the differing financial conditions of the STVAK districts, Table 3 presents the computed “profitability” of each of the seven operating districts and the Transmission District for 1993.

Although STVAK and its districts do not maintain their budget or expenditure reports on a “cost center” basis, the WASH consultants, with the assistance of the financial managers, particularly the Deputy Director for Finance of the Central Authority, have been able to prepare an adjusted table for the profit and loss of each of the eight districts. The annual costs for the operation of the central STVAK Administration have not been included. Table 3 accounts for the cost of bulk water provided by the Transmission and, in some cases, traded between districts. It shows the widely varying profit and loss figures for each of the districts. The Transmission District should be a break-even operation since it develops annual water charges designed to recover its costs.

Table 3 also shows a variance from a profit of \$1,036,000 SK for the Banska Bystrica District to a loss of 19,480,000 SK for the Lucenec District. The WASH team believes that the two major contributors to the variances are the source of the water and the percentage of residential customers, both of which are beyond the ability of the districts to significantly alter.

It should be noted that the “profitability” figures in Table 3 do not include the costs of capital facilities other than routine depreciation. Slovakian law requires that money be set aside in the districts’ operating budgets for depreciation of capital equipment and facilities. Because of the authorities’ difficult financial situations, they have not been able to set aside all of the required funds. In addition, the authorities have found it necessary to use the depreciation funds to compensate for the increasing amount of uncollected fees.

As an example, the Central Slovak Water and Wastewater Authority collected a total of 150,000,000 SK in 1993 from the various district budgets. However, at the end of the year, they had to use 52,000,000 SK of those funds to take care of uncollected water and wastewater accounts. Unfortunately, under the present budget and reporting practices of the authorities and districts, the uncollected fees are not treated as an expense item, and therefore this growing problem does not receive the attention and focus that it deserves.

**TABLE 3****ADJUSTED 1993 PROFITS AND LOSSES FOR THE SEVEN DISTRICTS  
IN THE STVAK AND THE TRANSMISSION DISTRICT**

District	Profit/Loss W/O Water Charge	Cost of Water	Profit/Loss With Water Charge
01 - Banska Bystrica	+ 62,773SK	11,737SK	+ 51,036SK
02 - Lucenec	+ 7,002SK	26,482SK	- 19,480SK
03 - Prievidza	+ 17,822SK	13,429SK	+ 4,393SK
04 - Rimavska Sobota	- 11,215SK	+ 7,479SK	- 3,736SK
05 - Velky Krtis	- 4,339SK	3,315SK	- 7,654SK
06 - Zvolen	+ 30,405SK	14,528SK	+ 15,877SK
07 - Ziar nad Hronom	- 8,831SK	5,253SK	- 14,084SK
08 - Transmission District	- 64,085SK	67,265SK	+ 3,180SK

The figures were furnished to the WASH Team by the Deputy Director for Finance of the Central Slovak Authority.

All of the figures are expressed in thousands of SK.

The water charges refer to the monies being collected by the Transmission District for water delivered to the operating districts.

To summarize, under their present financial conditions, the authorities are increasingly using depreciation funds to balance cash flow and other problems rather than reserving the funds for capital investment purposes.

**Local water and sewer authorities will need significant amounts for capital investment in rehabilitation and in new sewer and wastewater treatment plants.**

The issue of capital investment financing is perhaps the most problematic, given the overall shortage of funds and the municipal and regional authorities' lack of experience in dealing with it. The most salient issues include the following:

- Uneven (subsidized) investment in different localities in the past, raising an equity concern;
- Lack of funds at the national level for providing an adequate supply to meet the backlog of need;

- No agreement on the role that municipalities will play in either providing capital investment funds or guaranteeing loans;
- Practice of providing small amounts of capital financing from the State Environment Fund, which does not allow projects to be completed.

To illustrate the issue of equity in past water and sewer investments, Table 4 presents the per capita value of STVAK assets for the seven operating districts that will be transferred to municipal ownership under current national law. The table notes that there are large discrepancies in the amounts invested per capita by district. Velky Krtis has over twice the per capita in water supply as Banska Bystrica and Prievidza, partly because those two districts have concentrated populations in dominant cities. On the other hand, Prievidza has three times the per capita wastewater investments as Rimavska Sobota. Indeed, Rimavska Sobota has received a very low investment per capita in wastewater facilities

**TABLE 4**  
**INVESTMENTS IN WATER AND SEWER SYSTEMS**  
**BY DISTRICT IN THE STVAK, 1992**

(Slovak Koruna)

District	Population (000)	Water Supply Inv't (mil)	Waste Water Inv't (mil)	Per Capita W.S. Inv't	Per Capita W.W. Inv't	Per Capita Total Inv't
Banska Bystrica	178.2	298.9	297.9	1677	1672	3349
Lucenec	95.9	174.0	125.5	1814	1309	3123
Prievidza	139.5	299.5	265.1	2147	1901	4048
Rimavska Sobota	99.1	202.6	64.7	2044	653	2697
Velky Krtis	46.9	164.4	55.7	3505	1187	4692
Zvolen	122.1	343.7	157.6	2815	1291	4106
Ziar nad Hronom	93.2	240.8	123.6	2584	1326	3910

All figures are based on 1992 summary of Regional Water and Sewer Authority data issued by MSM.

All figures are based on depreciated asset values ("Fixed Assets - Remaining Value") as reported in the MSM annual report.

compared to the other districts, and the city of Rimavska Sobota is now struggling to raise financing for a wastewater treatment plant on its own. Banska Bystrica has the highest coverage of both water supply and sewerage, and it is perceived by municipal officials in other districts to have received the highest investment levels in the past; however, in per capita terms, Banska Bystrica ranks below four other districts.

The lack of funds at the national level for water and sewer investments has been documented in previous WASH reports, and there still appears to be little movement on this issue. One potential source of capital funds would be a severance tax on water usage, instituted on all water sources and serving as a replacement for the surface water charge now levied by the RBAs. As noted above, the current RBA charge is structured more as a tax than as a true user charge. To replace this uneven system with a uniform water use tax would be more equitable and could generate substantial funds for capital investment. For example, annual production of drinking water through the five regional authorities is about 590 million cubic meters. A one Koruna severance tax on this production would raise SK590 million, an amount equal to about one third of the total capital investment in the sector annually. This would also reduce some of the sharp price differences in bulk water as noted in Table 1.

With regard to the role of municipalities in capital financing, there has been very little discussion to date. As previously noted, the lack of local revenue-raising authority under current national legislation limits the capacity of municipal governments to play a significant role at present. On the other hand, municipalities will become the owners of local water and sewer systems and will therefore become financially responsible for those capital assets. This issue of responsibility is critical in the formation of regional companies, particularly in the role of guaranteeing debt of the regional companies.

### **2.3 Technical Factors**

The technical issues involve breaking the regional water authorities into smaller systems and whether the existing network of long transmission lines needs to be maintained as a single system within each of the four regions outside Bratislava. The main consideration is the location and adequacy of water sources compared with consumption demand.

**Maintaining a single transmission line company in each region may not be necessary.**

WASH has examined the system in the STVAK region and determined that the current regional authority could be readily broken into three to five smaller companies without having to maintain a single transmission line system. If three companies are formed, one would consist of the current districts of Banska Bystrica, Zvolen, and Ziar nad Hronom; the second would include Lucenec, Velky Krtis, and Rimavska Sobota; and a third the Prievidza district.

For the sake of analysis and data comparability, the restructured regional companies are based on existing STVAK districts. The issue of whether to create three, four, or five companies

depends on whether Banska Bystrica district is a separate company or joined to Zvolen and Ziar nad Hronom and whether the district of Rimavska Sobota will be a separate company after the Malinec reservoir in the Lucenec district is completed.

The district of Banska Bystrica has major water sources (PSV Pohronsky transmission line system) that also supply the Zvolen District with inexpensive groundwater. The main advantage of joining the three districts would be to secure financial viability for the Zvolen and Ziar nad Hronom districts.

Once the Malinec reservoir is in full operation, the Lucenec district will no longer need to acquire water from the Klenovec reservoir. This will leave sufficient water for the Rimavska Sobota district, which currently operates and maintains the water treatment plant along with the transmission lines within the district. The district also sells some water to the transmission line district, as shown in Table 2. As a result, Rimavska Sobota may prefer to create a separate company.

Although the Malinec reservoir will meet the current needs of the Lucenec and Velky Krtis districts, future development will require that the Hrinova reservoir provide about 50-70 liters per second for Lucenec and 30-40 liters per second for Velky Krtis. The Lucenec district operates the water treatment plant in Malinec.

Ownership of the transmission line and the water treatment plant within the Prievidza district still needs to be resolved since they lie outside the district's current boundaries.

Table 5 estimates the water delivered from the main water sources by the transmission line district to other districts in 1993. It should be noted that Central Slovakia experienced water shortages in 1993. On the basis of the data in Table 5, one can estimate the amount of water transfers among companies that would result from the restructuring. There would continue to be small bulk water transfers among the districts, but these could be handled under sales agreements and would not require a separate bulk water company.<sup>5</sup>

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<sup>5</sup> If the detailed analysis justified the need for a separate bulk water company either in this region or in East or West Slovakia, then this separate bulk water company should be established as a daughter company of the municipal regional companies served.

TABLE 5

## ESTIMATE OF WATER TRANSFERRED AMONG THE DISTRICTS

Estimate of transfer of water from main water resources among the districts derived from 1993 data.							
Service District	Water produced by the SD facilities l/s	Water taken from PSV <sup>1</sup> (groundwater) l/s	Water taken from HLF-Hriňová reservoir <sup>2</sup> l/s	Water taken from RSV-Klenovec reservoir <sup>3</sup> l/s	Water taken from THP Turček intake point <sup>4</sup> l/s	Water taken from Málinec reservoir <sup>5</sup> l/s	Total for 08 2 + 3 + 4 + 5 l/s
	1	2	3	4	5	6	7
01-Banska Bystrica	464	481					481
02-Lučenec	23		163	79			242
03-Prievidza	387				165		165
04-Rimavská Sobota	83			167 = [246-79']			[167]
05-Velký Krtíš	74		29				29
06-Zvolen	409	143	90				233
07-Žiar nad Hronom	183	80			25		105
08-Transm. District				[79']			[79']
Total	1623	704	282	246	190		1255

There are seven service districts (SD) in STVAK (01-07) and one transmission line district (08).

## Notes:

(') Water taken by SD 08 from SD 04 and subsequently delivered to 02. Water supply to Rimavska Sobota district is fully provided by SD 04, and therefore the total in column 7 does not consider the data shown in brackets.

(1) PSV is the largest transmission line system constructed in 1957-1965. The main water resources are the springs in Harmanec and Jergaly located above Banska Bystrica. PSV supplies the districts of Banska Bystrica, Zvolen, and Žiar nad Hronom. It is mutually interlinked with the Hriňová-Lučenec-Filakovo (HLF) transmission system.

(2) HLF, a transmission line system constructed in 1956-1964, supplies the districts of Lučenec, Velký Krtíš, and part of Zvolen. The main water source is the Hriňova water reservoir located in the Zvolen District, with a WTP capacity of 260 l/s. This system is mutually interconnected with RSV.

(3) RSV is the Rimavský transmission line system, supplying the Rimavská Sobota District since 1974. The main water source is the Klenovec water reservoir in Rimavská Sobota District. The capacity of the WTP is 460 l/s. RSV is operated by SD 04.

(4) THP is a transmission line system for Turček-Handlová-Prievidza constructed in 1990. The capacity of the WTP is 250 l/s. It supplies the districts of Prievidza, Žiar nad Hronom, and a small part of Martin. At present, a water reservoir in Turček is under construction, located in the Martin district. The WTP is operated by SD 08.

(5) The Málinec Water reservoir will soon be operating. The WTP is under the operation of the Lučenec SD. Its capacity is 280 l/s, and it will provide water for Lučenec and Velký Krtíš districts. It indirectly allows development in Rimavská Sobota District by redistribution of RSV water supply to other users.

Two additional technical issues remain:

- How the specialized technical support services (engineering design, effluent monitoring, and laboratory services) could be provided
- How the restructuring might affect the very high levels of UFW.

**Specialized technical support services can be readily provided under restructuring.**

Engineering design and construction services can be readily obtained from the private sector. Indeed, there is every reason to believe that the facilities design will be more cost-effective since the new facilities will have to be designed within rigorous cost constraints imposed by the new water authorities—a factor notably lacking in the past.<sup>6</sup>

Field observations in the STVAK region indicate that there has been a proliferation of laboratories with STVAK districts and that some of these could be consolidated efficiently. Therefore, access to laboratory services in the restructured companies should not pose a problem and, in fact, the restructuring should permit needed consolidation.

Effluent monitoring (into municipal sewerage networks and from wastewater treatment plants (WWTPs)) is now done on a district basis. And discharges from WWTPs are also monitored both by district environmental inspectorates (under the Ministry of Environment) and by the RBAs, who impose effluent changes and fines. This would not change under any of the restructuring scenarios.<sup>7</sup>

**UFW is unacceptably high and reduces the amount of money available for capital financing.**

The problem of high levels of UFW appears to be a problem mainly of incentives within the existing regional water and sewer authorities. For example, within the STVAK region, few of the district offices have leak-detection programs and follow-up repair programs. Metering is generally well maintained due to the presence of a full-time meter calibration and repair facility in Prievidza that does contract work for the other districts. All larger meters are sent to the Water Transmission district in Bratislava for calibration and repair. Therefore, there is a reasonably good accounting of water flow through the various transmission and distribution networks.

Most of the STVAK districts do have leak listening devices, and the STVAK regional office maintains state-of-the-art “Correlator” leak detection equipment. Therefore, the problem is not one of inadequate equipment but of organization and incentives. In part, this must be attributable to the organizational structure and incentives within the regional company, which in the past has had little impetus to address UFW. Since financial viability has not been a consideration, financial losses caused by the high level of UFW have not mattered.

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<sup>6</sup> See WASH Field Report No. 411, *Water Quality Preinvestment Studies in the Hornad Basin in Slovakia*.

<sup>7</sup> The issue of the adequacy of the effluent charges is a different matter, and there is evidence that the current fee/fine structure is not sufficient to influence behavior of polluting industries.

Indeed, in the past, there was more to be gained by developing new water sources to overcome high UFW rates than by making the existing systems more efficient.

With the current severe shortage of capital investment funds, however, local authorities must lower their investment needs, particularly for new water source development. New source development should not be a high priority for the near term, mainly because water consumption is dropping in response to price increases and a decline in industrial activity. Overall, increases to the total water supply should come from investments to reduce UFW. In the STVAK region, districts with high water costs and high UFW should be special targets for a UFW reduction program; based on reported statistics of the STVAK, this means that Velky Krtis (35.04 percent UFW), Lucenec (34.57 percent UFW) and Zia. nad Hronom (35.38 percent UFW) would be priorities.

## Chapter 3

### POTENTIAL OPTIONS FOR RESTRUCTURING

This chapter analyzes five potential options for restructuring, including those that the WASH team believes merit consideration. Each description is followed by the option's advantages and disadvantages. The chapter also draws an overall conclusion about which options offer the best promise for Slovakia.

#### 3.1 MSM Restructuring Proposal (also known as "ABC")

This is the latest option proposed by the MSM in May 1994. Because it is the only official proposal, it deserves special consideration.

The proposal has the following three main features, which is why it is referred to as ABC:

- "A" calls for the transfer of the fixed assets to the municipalities free of charge. Fixed assets include the water distribution and wastewater collection and treatment systems within the boundaries of individual municipalities as well as local water sources and local transmission lines. The municipalities will operate and maintain these systems.
- "B" calls for the privatization of the operational assets. Operational assets are defined as the movable property needed to operate and maintain the water distribution and wastewater system. This includes specialized vehicles, specialized equipment, laboratories, and heavy equipment. Privatization essentially means that these assets will be sold to the highest bidder at a public auction.
- "C" specifies that the state will continue to own and be responsible for water sources, the transmission lines, pumping stations, water treatment plants, and the operational assets needed to manage them. These assets will be run by the current authorities until they are transferred to other entities.

The draft proposal provides details for "C" only since this section requires continued state participation. The proposal is to establish six regional operating companies to be located in Bratislava, Trnava, Banská Bystrica, Žilina, Poprad, and Košice. These companies are envisioned as joint stock companies, with the state initially owning 100 percent and municipalities eventually owning 66 percent. The municipal shares would be based on population.

### **3.1.1 Advantages**

The advantages of this option include the following:

- Continuity of service for bulk water will be achieved because the same people will be managing the transmission lines.
- Decisions for improvements in infrastructure within the municipality (such as expanding the capacity of the wastewater treatment and rehabilitating the water supply distribution network) will be under local control. Currently, the regional authority makes those decisions.

### **3.1.2 Disadvantages**

The disadvantages are as follows:

- The municipalities will not control the operational assets. Because the municipalities currently have no money to buy the operational assets, they will be given assets that they do not have the tools and equipment to operate and maintain. This will force them to turn to those who are financially able to purchase the operating assets. The price of selling the assets will be reflected in the increase in the price of water.
- The municipalities will have very little control over the price of water since they will have to purchase bulk water from the regional transmission line company. Since the price of bulk water is uniform within quite a wide area and does not reflect actual cost differentials, municipalities with access to cheaper bulk water, say groundwater, will not be able to lower its price. In addition, water-intensive enterprises will have no incentive to choose cost-efficient locations.
- The regional transmission line company has no incentive to improve its efficiency. Because the regional company is not directly controlled by the municipalities and will continue a state-run monopoly, there is little reason to believe that it will improve its efficiency or control costs.

## **3.2 Smaller Regional Companies**

The WASH team, which looked in detail at the STVAK, concluded that it was feasible to divide that region into three financially viable municipally owned regional companies. One would be composed of the three eastern districts of Velky Krtis, Lucenec, and Rimavska Sobota. Another would be made up of the three districts of Banska Bystrica, Zvolen, and Ziar nad Hronom. The third would conform to the current district of Prievidza. The boundaries of these three new companies coincide well with the use of the Klenovec, Malinec, Hrinova, and Turcek reservoirs and the large groundwater sources that serve Banska Bystrica; therefore, there would be no need to retain a regional transmission line company. The operating personnel of the current authority would be divided among the three new companies.

Because of time constraints, the WASH team was not able to conclude whether it would be possible to create more smaller companies. For example, Brezno and its five or six surrounding municipalities may be able to create a company out of the Banska Bystrica district. This option would require that municipalities first create a regional company and then agree to have their assets transferred. Operational assets currently under the regional authority would be distributed free of charge to these smaller regional companies according to criteria that would allocate them fairly.

This option will be successful only if the municipalities within a service area form a regional water and wastewater company in which they own shares. This municipally owned company would be governed by a board of directors composed of representatives of the municipalities and individuals not employed by the municipalities. The board would hire and fire the top managers of the water and wastewater company, review and approve budgets, approve tariff rates, and monitor the overall performance of the utility. The general manager of the utility would report to the board of directors. Such a board would prevent excessive interference by the municipalities in running the water company and could provide knowledgeable oversight of operations.

If the regional transmission line company is eliminated, it will be necessary to ensure that companies sell water at fair rates and that water is transferred among companies when needed. A board to oversee this process should be composed of representatives of the state administration in the region, from the Ministries of Soil Management and Environment, and from the regional ZMOS.

The WASH study of the STVAK demonstrates the financial and technical viability of the concept of smaller regional companies. Although all of the regions would have to be studied, the WASH consultants strongly suspect that the concept would be viable in other regions as well. It is likely that regional transmission line companies would have to be created in East and West Slovakia to manage that part of the transmission line system that serves a large part of the region.

### **3.2.1 Advantages**

The advantages of smaller regional companies are as follows:

- Smaller regional companies provide increased local control over decision making. Although the municipalities would have to delegate decision making to a board of directors (made up of representatives of municipalities), this option would clearly provide more control than a larger regional company.
- The elimination of the regional authority would reduce the overhead costs associated with a central office. These costs include not only personnel but also the offices and equipment needed to operate them.
- Small regional companies would still be large enough to provide operating efficiencies. They would, for example, be able to provide laboratories, heavy equipment, and vehicles

that individual municipalities would be unlikely to afford. It would be possible to divide the operational assets rationally as long as not too many companies were formed.

- These companies could gain access to credit for financing capital projects insofar as they could secure guarantees from the municipalities.
- Municipalities not currently connected to a public water supply system would be included within the jurisdiction of a regional company.

### **3.2.2 Disadvantages**

Smaller regional companies would have the following disadvantages:

- Individual municipalities would not have the freedom to choose whether or not to join the regional company. This would avoid having municipalities with low-cost water sources go their own way and thus increase the average cost to other municipalities.
- Prices in some areas would rise. An area that primarily uses ground water would be able to lower the price of water while an area that depends on surface water would have to increase the price. As an example, the company formed from the districts of Lucenec, Rimavska Sobota, and Velky Krtis would probably have to increase the price since it would no longer be subsidized by the cheaper water source in Banska Bystrica.
- As a result of the price increase, some smaller regional companies would need state subsidies, assuming they could not make up the difference by eliminating the cost of maintaining a central authority overhead, decreasing UFW, and increasing tariffs. It is possible, however, to charge a severance tax on all water sources and use this money for state subsidies for areas that are unable to afford substantial price increases.

### **3.3 Smaller Regional Companies with a “Daughter” Transmission Line Company**

A variation on the option discussed in Section 3.2 is to create a “daughter” company to manage the regional transmission lines. The daughter company would be entirely owned by the smaller regional companies (in the case of Central Slovakia, this would be three or four companies) that are served by the transmission lines. The daughter company would have its own board of directors, with each of the new companies having an equal number of shares and votes in the selection of board members, the setting of rates, the selection of the general manager, and other tasks. The board members should consist of representatives of the boards of each of the smaller companies since they would be intimately familiar with the water issues in the area. This option could be applied in West, Central, and East Slovakia where large transmission systems are in place.

### **3.3.1 Advantages**

The following are advantages of having a daughter company:

- The price of bulk water would be the same for all companies sharing the transmission lines.
- Because the daughter company could be entirely controlled by the municipalities through the smaller regional companies, it would be more responsive to their needs.

### **3.3.2 Disadvantages**

The following are some of the disadvantages:

- The price of water would not reflect true cost differentials of different locations since the transmission line company would charge the same bulk water rate throughout the region. While some view this as an advantage, it is not economically efficient.
- The daughter company, as a free-standing enterprise, might not always act in the best financial interest of all the parent companies. To remain solvent, it will have to charge the highest prices possible for bulk water.
- The development of new water sources would be more complicated since it would have to pass through another layer of decision making.

## **3.4 Flexible Solution**

This option involves transferring the ownership of the water supply, distribution and wastewater collection and treatment infrastructure to the municipalities. It is discussed in WASH Field Report No. 433.

With this option, each municipality would decide how it wants to arrange for water supply and wastewater services. Some individual municipalities, especially those that have independent water sources, would own and operate their own systems. Other municipalities, most likely those that share a common transmission line, might form a smaller regional company as described in Section 3.2. Finally, where many municipalities share common transmission lines, as in Central Slovakia and West Slovakia, they might decide to form several smaller regional companies to operate and maintain water distribution and wastewater systems. A daughter company, as described in Section 3.3, would own the common transmission lines. Operational assets would be allocated free of charge.

### **3.4.1 Advantages**

The advantages of this option include the following:

- Municipalities have the most freedom to choose how they want to provide water and wastewater services.
- The regional transmission line company would be directly controlled by the regional companies that it serves.
- There would be continuity in the management of most of the bulk water system.
- Service area boundaries would have to conform to water systems defined by their technical and financial viability and not necessarily to their current district boundaries.

### **3.4.2 Disadvantages**

The disadvantages are as follows:

- The price of water would have the greatest disparity since it would be based on its actual costs.
- Municipal officials would have to be knowledgeable in order to decide which is the best option. Most municipal officials are currently unsophisticated regarding these issues.
- Some municipalities, especially those that are currently not connected to a public water system, might be left out of a regional company.

## **3.5 Regional Authorities with Local Control**

This option would essentially keep the current system intact. The main difference, and a very important one, is that the company would be entirely owned by the municipalities and would be governed by a board of directors. Transferring ownership and control from the state to the municipalities is intended to increase the authority's responsiveness.

### **3.5.1 Advantages**

This option has the following advantage:

- It doesn't require the municipalities to play a direct role in the provision of services. They continue to receive services from the same institution.
- Because the regional authority would be accountable to local governments, it would be required to provide better information to the municipalities.
- The price of bulk water would remain uniform, thus benefiting areas with higher cost water sources.

### **3.5.2 Disadvantages**

The following are disadvantages of using the same system:

- No incentives for improving efficiency are introduced.
- Municipalities would have limited control over decisions because they are part of a much larger company.
- Access to credit for capital investments may not improve.

### **3.6 Recommended Option**

In reviewing these five options, the WASH team considered the following criteria to be the most important:

- Local control over water and wastewater services;
- Accountability of water and wastewater companies to municipalities;
- Ability to set tariffs that reflect the true cost of water and wastewater services;
- Provision of incentives to the operating companies to improve efficiency;
- Greatest potential for gaining access to capital financing

Although each of these options has advantages and disadvantages, the WASH team believes that some offer more hope for the future. ABC effectively ties the hands of the municipalities by selling the operational assets and limits municipal decision making by not giving them control over the provision of bulk water. Maintaining a regional authority with local control perpetuates the current system, which appears to be unacceptable to most municipalities.

The WASH team believes that the best options are smaller regional companies (Section 3.2) and a flexible solution (Section 3.4). Both options significantly increase municipal control and create the conditions for water companies to operate on a commercial basis. In addition to transferring the fixed assets to municipalities, as required by law, they provide increased ability to set water and wastewater rates and to decide on new capital projects. They also allow the municipalities to monitor the performance of the water companies and their overall responsiveness to municipal needs.

Because municipalities do not currently have much experience in managing water and wastewater services, most would have to form smaller regional companies. Some individual municipalities not connected to any main transmission lines might elect to manage their systems independently. They should have that option. The result would be that all municipalities would operate either on a self-contained basis or as part of a smaller regional company. It is preferable for a smaller regional company to also control its transmission lines in order to give it more control over costs and tariff setting. If a company can control the

factors that influence its costs, it will be more likely to run efficiently and keep its water rates under control.

In the case of West and East Slovakia, where many municipalities are served by long transmission lines fed by one or two major water sources, it will probably be necessary to form regional transmission line companies. These transmission line companies should be wholly accountable to any regional distribution companies that are formed, such as a daughter company, and they should manage only those transmission lines that are part of a single system. Separate transmission lines not connected to the large system should be given to the smaller regional companies wherever possible (e.g. transmission line from Turcek to Prievidza).

These new regional companies would form in two ways. In some cases, municipalities would organize themselves into companies such as those in Prievidza. In other cases, the ZMOS, in collaboration with the district offices of the regional water and wastewater authorities, would encourage municipalities to form companies according to technical and financial factors. A neutral national oversight board would then evaluate the municipalities' proposals. This would guarantee equity in allocating water resources and would ensure that no municipalities are left out. The transfer of operational assets free of charge to these smaller regional companies should be a strong motivating factor for their formation.

The WASH experience in Central Slovakia indicates that it is possible to form smaller regional companies that conform to current district boundaries. Although this is preferable, there may be some cases where new companies do not conform to current boundaries.

Also, there should be flexibility in forming these companies. Brezno and the municipalities that are connected to that system might want to break away from the Banska Bystrica district. As long as this does not adversely affect the overall district, it should be allowed.

Clearly these new regional companies would have to retain the services of the effective, well-trained, and experienced employees of the current water and wastewater authorities. If each authority is divided into three or four regional companies, the number of management personnel could be reduced. The new company boards would need to develop a fair and equitable process to evaluate the current managers and decide who among them will best qualify for the top positions. A great deal will depend on the willingness of the top managers to adopt new and business-like approaches in operating their companies.

## Chapter 4

# STEPS IN DEVELOPING A RESTRUCTURING PLAN

### 4.1 Introduction

This chapter focuses on the specific steps needed to develop a restructuring plan that is acceptable to all interested parties. It also suggests specific steps that will be required to help local companies get organized. These steps are a result of the analysis and recommendations in this report and are consistent with the recommendations in WASH Field Reports Nos. 433 and 439. They benefit from the additional experience that WASH has gained over the past five months.

### 4.2 Next Steps

#### 4.2.1 The Association of Towns and Cities (ZMOS)

In general, ZMOS must be much more active in assisting the municipalities in the restructuring effort. No other organization currently involved in the restructuring is looking out for the interests of the municipalities.

The recommended specific steps follow. ZMOS will need external technical assistance to accomplish these tasks.

#### *Help the Municipalities to Get Organized*

The following actions will help the municipalities to get organized:

- Organize a program to educate the municipalities about the restructuring of the water and wastewater sector. This program should include meetings in all the regions as well as the development of written materials.
- Assist the municipalities in preparing proposals for transformation, with an emphasis on financially and technically viable smaller regional companies. The current MSM proposal calls for the existing water authorities to submit proposals. The preparation of these proposals will require detailed information about the water and wastewater systems. The district offices of the regional water and wastewater authorities will have to provide this information.
- Draft a prototype foundation document for a municipally owned authority. Once the municipalities have organized into small regional companies, they will need to prepare a foundation document that spells out the nature of the public shareholding company and

the relationship between the general manager and the board of directors. Appendix C includes a list of the key issues that should be addressed in the foundation document.

### *Provide Training and Technical Assistance*

The following steps will assist the municipalities in their restructuring efforts:

- Organize training programs for boards of directors as soon as the transformation proposals are approved. Few of the individuals selected for the boards will have the necessary experience or knowledge to be policy makers for the new companies. The new companies will not function successfully unless the members of the boards understand their role, as well as the underlying laws and the finances of the water and wastewater sector. Failure to provide the training may result in costly missteps, which could reduce the company's credibility with customers.
- Organize training programs for the top management of the new water companies. The top management staff, both technical and financial, understand very little about operating a business. They have not had experience with rate studies, strategic financial planning, and modern management techniques. They have not had experience with boards of directors. They are not used to sharing information with lay people and receiving policy guidance on their actions. If the new companies are to operate in a businesslike manner and with a minimum of friction with the boards of directors, the new management staff will need training.
- Design a technical assistance program for the municipalities. The technical assistance program should focus on the following two key items.

**Rate setting.** Few of the current authority and district managers have any experience with modern approaches to rate setting. Rate setting in most developed countries is the result of efforts by consulting firms with extensive experience in gathering data and recommending various rate structures for consideration by policy makers. It involves looking at various trends, such as inflation, population, water usage, and industrial growth, over a five-to-seven-year period. The consultants consider the trends and project various options for differential rates. It is then up to the management and the boards of directors to decide the rate structure. All of the new companies should undertake such a rate study during their first year of operation. Since Slovakian firms have little expertise in rate studies, foreign firms will need to train them to provide these services.

**Management audits.** Each of the new company boards of directors should commission a management audit during the first year to give the board members and top managers clear objectives for improving operations. Otherwise the board will not have access to neutral outside information on which to base its policy decisions. Such a management audit should take place every three years. Again few Slovakian firms are likely to have experience in conducting management audits, so foreign firms will have to develop this capacity for them.

### **4.2.2 Regional and Water and Wastewater Authorities**

Since they have intimate knowledge of the systems, the regional water and wastewater authorities will play the following role during the transition period:

- Provide data to the municipalities on the cost of providing water and wastewater services to each district and each municipality. The existing regional authorities have all the technical and financial data in operations but typically do not share this with the municipal officials. These data will be required for municipalities to make an informed decision about how to form smaller regional companies.
- Assist the municipalities in drafting transformation proposals that are technically and financially viable. Since the current water and wastewater authority personnel have a virtual monopoly on the expertise in the sector, assistance from the district office is essential. Their intimate knowledge of the system is required to formulate sound proposals.

Most staff of the authorities will continue to work in the sector under a different organizational structure.

### **4.2.3 The Ministry of Soil Management**

As the ministry responsible for water and wastewater, the MSM will play the key role over the next 18 months—the current timetable for putting the restructuring plan into operation—and after the restructuring plan goes into effect. Below are the key recommended actions.

Before the Restructuring

The following should be done before restructuring begins:

- Adopt a policy that operational assets will not be transferred to individual municipalities but to groups of municipalities. This will provide strong motivation for municipalities to form smaller regional companies and will prevent the atomization of the existing system.
- Support a process for the development of transformation proposals that has the following three steps:
  - Educate the municipalities about the restructuring;
  - Provide information from the regional authorities about the water and wastewater systems in individual municipalities;
  - Draft transformation proposals by the municipalities and the district offices of the regional authorities.

This process may stretch out the timetable for the submission of proposals, but it is important not to rush the development before municipal officials are sufficiently educated.

Their participation and understanding are critical to the long-term success of the new companies.

- Form a committee with broad-based representation to review the transformation proposals. Because of the importance of the nature of the water and wastewater sector, this committee should have representatives from all major concerned ministries—Soil Management (including the regional authorities), Environment, Finance, and Privatization and the Slovak Anti-monopoly Office. In addition, ZMOS should be an active participant in reviewing the proposals to ensure that the municipal viewpoint is considered. The regional authorities should not be the major focal point for reviewing these proposals.

#### Transition Period

During the transition period, the following steps should be taken:

- Revise the bulk water charge system applied by the RBAs so that the price reflects the actual cost of making the bulk water available. This may be combined with a severance tax on all raw water extraction, in which case the bulk water charge may be removed altogether.
- Revise the uniform tariff policy so that local water authorities have the autonomy to impose differential tariffs.
- Help modify current legislation so that the new water and sewer companies can operate as nonprofit companies. The commercial code does not provide for nonprofit companies, meaning that under current law the government may be able to collect taxes on the “profits” of the water company (if profits are defined as all revenues that exceed expenditures). Since by western standards a financially sound water company should be able to generate sufficient revenues to pay for 70 percent of its capital investments including debt servicing, it is important that excess revenues not be taxable. The revenues are not profits in the traditional sense; they will not be distributed to either the municipalities or personnel of the water company.

#### After the Restructuring

Once the restructuring is completed, the following should be done:

- After the next 18 months, the MSM will continue to monitor the restructuring program to ensure that problems are addressed. The MSM should create a special unit responsible for this monitoring. Although the specific functions of this unit will need to be defined, the following are illustrative of what it might do:
  - set performance standards for the new companies;
  - monitor the performance of the new water companies through regular data collection and analysis;

- assist in resolving any disputes among the new companies;
- ensure that conditions are in place for competition in providing water and sewer services;
- manage a new water fund created from the severance tax and target subsidies to poor areas;
- organize and chair the oversight board to ensure that charges for water sold from one company to another are fair.

## Appendix A

### Information Needs of Municipal Governments

Municipal government officials need detailed information to enable them to make informed decisions in selecting the appropriate option(s) for their localities. This information should include the following:

- Technical data
  - water sources (flow amount, quality and treatment requirement);
  - location and condition of the water distribution network (including needed rehabilitation, works in progress, etc.);
  - location of consumers (water consumption, existence and condition of meters);
  - location and condition of the sewer collection system (including needed rehabilitation, works in progress, etc.);
  - location of connections;
  - characteristics of the local transmission line system;
  - special characteristics of industrial effluent (including seasonal variation);
  - condition, capacity, and technology of the wastewater treatment plant(s);
  - special problems with WWTP effluent and receiving water quality standards that must be met;
  - forecasts of future demand.
- Financial data on water and sewer services, including
  - revenues from residential and industrial consumers;
  - tariffs;
  - unpaid accounts;
  - cost data on all operations broken down by water sources, water treatment, pumping and distribution, billing/collections, and administration;
  - sewerage collection, WWTP operations;
  - environmental fines and fees and estimates of near-term capital costs (such as equipment, infrastructure rehabilitation, and special projects).

The district offices of the regional water and wastewater authorities will have to provide these data. They are the only sources of these data, most of which will have to be provided to each municipality. The district offices maintain all of this information in one form or another for their internal operations, but clearly the effort to assemble and provide it to each municipality is a time-consuming process. Furthermore, the municipal officials will need some basic explanations on what the data contain and how to read them—again, information that only the district office staff can provide.

## Appendix B

### Main Legislation Relevant to the Decentralization Issue

Below is a list of the most important laws affecting the restructuring of the water and wastewater sector.

1. Law 138/1973. This is the basic document that deals with policies for water protection and conservation. This law also provided for payments for the intake of surface bulk water by the authorities and for the discharge of wastewater into streams. A detailed description of the law along with the history of institutional arrangements in the water sector is included in the report by USAID/CCAP "Hornad River Basin Institutional Reforms Project."

2. Law 369/1990. The Law on Establishment of Municipalities became effective on January 1, 1991. Article 4 (f) of the law stipulates that "A municipality administers its internal matters, and in particular provides for public utility services (collection of household waste and cleaning of municipal grounds, administration and maintenance of public greens and public lights, water supply, wastewater disposal and others) and public transport."

The terminology "provides for public utility services" (including water supply and wastewater disposal) does not necessarily mean the direct ownership of the particular assets but can include a shareholding arrangement in a regional water and wastewater company owned by several municipalities.

The law further resulted in the role of founder and administrator for the regional water and wastewater authorities passing from the now defunct Regional National Committees to the Ministry of Forestry and Land Management in the second half of 1991.

3. Law 92/1991. The Law on the Transfer Conditions of State Property to Other Parties (Entities), Article 45 in the statute, prohibits the selling of state enterprise property before the transformation process (from the state to the new owner) is completed. It has been known as the "block" article since it was intended to block the speculative activity on the part of state enterprise managers during or before the transfer period.

4. Law 138/1991. The Municipal Property Law, dated March 20, 1991, provides in Article 3 (f) that "The following are the items which shall not fall under the ownership of municipalities: objects of technical utilities including water lines, sewerage, gas lines, gas control stations, power distribution stations, transformer stations, telecommunication buildings, light current and TV signal distribution stations . . ." There is some confusion regarding the law since a few small communities have constructed and owned their water facilities over a period of time.

Since Law 138 was passed after the Law on Establishment of Municipalities, it might be inferred that the National Parliament took the position that water lines and sewerage that were part of larger systems (like gas and electric) should not be fragmented.

The transfer of ownership of the water and wastewater systems to local governments cannot proceed without legislation's being enacted, including an amendment to Article 3 (f) of the law on municipal property.

5. Law 453/1992. The Law on State Administration abolished the Ministry of Forestry and Land Management, and the water and wastewater management functions were transferred to the Ministry of Land Management. The new ministry became the founder and administrator of the five water and wastewater authorities (state-owned companies).

6. The Constitution of the Slovak Republic. The Constitution became effective on September 3, 1992. Several articles touched on water management issues as follows:

Article 4. The language of Article 4, which reads: "Raw materials, underground water, natural and thermal springs and streams are the property of the Slovak Republic," clearly establishes the ownership of all water resources to the national government.

Article 20 (2). In speaking about ownership of property, Article 20 (2) provides as follows: "For the purpose of safeguarding the needs of the society, the interests of the general public, and the advancement of the national economy, the law shall establish certain property (including that defined in Article 4) as the exclusive property of the State, the municipality, or specific corporate bodies." It could be inferred from the language of Article 20 that water and wastewater assets could be transferred directly from state ownership to public corporations in which municipalities were the stockholders.

Article 71 (1). The language in this article will likely be the topic of many discussions between the national government and the municipalities in the future. Specifically it states that "The municipality may be delegated by law to exercise the powers of state administration. All expenses relating to such delegation of state administration shall be borne by the state." This apparent attempt to prevent state-mandated costs on municipalities will lead to many differences of opinion as the national government and municipalities sort out their responsibilities. One could infer that the term municipality as used in Article 71 (1) could also apply to associations or shareholding companies composed of several municipalities.

There are additional laws related to restructuring, including the following:

- Law 513/1991 - Commercial Code, which does not include nonprofit corporations;
- Law 47/1992 - Civil Code of which Article 20 relates to associations;
- Law 455/1991 on entrepreneurship, which spells out the conditions for awarding licenses;
- Law 595/1990 on State Administration for Environment— this transfers regulatory powers from the Ministry of Forestry and Water Management and the regional and

district National Committees to the newly formed Ministry of Environment and the district and subdistrict environmental offices;

- Law 128/1991 on State Environment Fund;
- Law 278/1993 on administration of state property;
- Law 253/1991 on the National Property Fund;
- Law 286/1992 on income taxes;
- Law 212/1992 on value-added tax;
- Law 317/1993 on real estate property tax;
- Laws 229/1991 and 330/1991 on ownership issues regarding the Agricultural Land Fund and the Forestry Land Fund.

## Appendix C

### Key Issues to Be Included in a Foundation Document

#### General Assembly

The following issues relating to the general assembly should be included in a foundation document:

- Structure;
- Powers;
- Method for weighted voting of municipal representatives at the annual general assembly.

#### Board of Directors

The following issues relating to a board of directors should be addressed:

- Number of members;
- Qualifications of members;
- Method of selection;
- Term of service;
- Powers;
- Payment of members;
- Removal of members;
- Number and terms of members of Board of Supervisors;
- Powers of Board of Supervisors;
- Minimum number of board meetings per year;
- Prohibition of individual board members giving orders to company employees.

### General Manager

The following issues relating to a general manager of the water company should be addressed:

- Powers and responsibilities;
- Qualifications;
- Appointment and removal by the board.

### Development of Procedures

A foundation document should include particulars for the following:

- Development of personnel regulations by the board;
- Requirement for enterprise budgeting and reporting;
- Provisions for any conflicts of interest;
- Development of a strategic financial plan.

### Auditing Requirements

The following will be required:

- Annual financial audit and the publication of summary information;
- Rate study every five to seven years;
- Management audit every three years.

**Camp Dresser & McKee International Inc.**  
Associates in Rural Development, Inc.  
International Science and Technology Institute  
Research Triangle Institute  
University Research Corporation  
Training Resources Group  
University of North Carolina at Chapel Hill

**WASH Operations Center**  
1611 N. Kent St., Room 1001  
Arlington, VA 22209-2111  
Phone: (703) 243-8200  
Fax: (703) 243-9004  
Telex: WUI 64552  
Cable Address: WASHAID

## THE WASH PROJECT

With the launching of the United Nations International Drinking Water Supply and Sanitation Decade in 1979, the United States Agency for International Development (A.I.D.) decided to augment and streamline its technical assistance capability in water and sanitation and, in 1980, funded the Water and Sanitation for Health Project (WASH). The funding mechanism was a multi-year, multi-million dollar contract, secured through competitive bidding. The first WASH contract was awarded to a consortium of organizations headed by Camp Dresser & McKee International Inc. (CDM), an international consulting firm specializing in environmental engineering services. Through two other bid proceedings since then, CDM has continued as the prime contractor.

Working under the close direction of A.I.D.'s Bureau for Science and Technology, Office of Health, the WASH Project provides technical assistance to A.I.D. missions or bureaus, other U.S. agencies (such as the Peace Corps), host governments, and non-governmental organizations to provide a wide range of technical assistance that includes the design, implementation, and evaluation of water and sanitation projects, to troubleshoot on-going projects, and to assist in disaster relief operations. WASH technical assistance is multi-disciplinary, drawing on experts in public health, training, financing, epidemiology, anthropology, management, engineering, community organization, environmental protection, and other subspecialties.

The WASH Information Center serves as a clearinghouse in water and sanitation, providing networking on guinea worm disease, rainwater harvesting, and peri-urban issues as well as technical information backstopping for most WASH assignments.

The WASH Project issues about thirty or forty reports a year. WASH *Field Reports* relate to specific assignments in specific countries; they articulate the findings of the consultancy. The more widely applicable *Technical Reports* consist of guidelines or "how-to" manuals on topics such as pump selection, detailed training workshop designs, and state-of-the-art information on finance, community organization, and many other topics of vital interest to the water and sanitation sector. In addition, WASH occasionally publishes special reports to synthesize the lessons it has learned from its wide field experience.

For more information about the WASH Project or to request a WASH report, contact the WASH Operations Center at the above address