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Comparison of Water Services Development in Finland and Lithuania

ABSTRACT

The organisation of water services was thoroughly reshaped in Lithuania after the country regained her independence in 1990. The responsibility for water supply and sewerage transferred from the state to municipalities. In Finland municipalities are also responsible for water and wastewater services, but the state has never had any significant role. The practice of producing these services is quite different in the two countries. In Lithuania municipal companies operate water and wastewater systems with their own staff, while in Finland municipal utilities commonly outsource most of the work and the services on 1-3 year contracts, and perform only key operations with their own staff. This is one of the reasons why the number of people employed directly by Finnish water utilities is substantially lower than that of their Lithuanian counterparts.

1. INTRODUCTION

Lithuania and Finland gained their independence in the late 1910s after World War I. Prior to independence both countries had been under Russian rule, which accounts for the similarities in their pre-independence history. By 1940 the population of Lithuania had reached 3 million and the Finnish population stood at 3.7 million (Census 2001, Statistics Finland 2003). During and after World War II both countries suffered a lot. Finland managed to stay independent, even though almost 10 percent of the country's area had to be ceded to the Soviet Union and more than 400,000 people who had lived in the ceded areas had to be resettled (Karjalan Liitto 1997). Lithuanians did not suffer as much as Finland during the war, but tens of thousands of people were deported to work camps, first by the Germans and then by the Russians, and finally the country lost her independence and was occupied by the Soviet Union (Suikki 2000). But the suffering in Lithuania continued after the end of the war, when 180 000 Lithuanians were deported to work camps in Siberia from 1944 through 1953 (Zemaitiene 2000). Finally, after the collapse of the Soviet Union, Lithuania regained her independence in 1990.

In 2001 the population of Lithuania was 3.49 million (Census 2001); Finland has presently a population of 5.19 million (Statistics Finland 2003). In Finland local authorities (municipalities) have played an important role in the provision of services to the population since the ad-

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ministrative municipal structure was established. Municipalities have had, and still have an important role in basic and secondary education, health services, water, wastewater and solid waste services, street maintenance, fire fighting, etc. During the last 30 years the number of municipalities has slowly decreased as, mainly small municipalities, have merged with bigger ones. In the beginning of 2002 the number of municipalities in Finland was 448 while in the beginning of the 1970s the number was still 520 (Kuntaliitto 2002, Salmela 2002). The size of Finnish municipalities varies greatly - the largest by population is Helsinki with 560 000 people while the smallest one has less than 200 inhabitants. Six municipalities have a population of more than 100 000 people.

The administration of Lithuania was thoroughly reshaped after independence from Soviet-type centralised to a decentralised structure. At the regional level there are 10 counties while the local level has 56 municipalities (Puteikis et al. 1996). In recent years slight reorganisation has taken place so that in 2001 the number of municipalities was 60 (Statistical Department 2001). The municipalities are much closer in population size than Finnish municipalities. Only two Lithuanian municipalities have a population of less than 10 000 and about 70 percent have a population between 20 000 and 70 000 (Statistical Department 2001). Five municipalities have a population over 100 000; the largest one is Vilnius with 550 000 inhabitants (Census 2001).

Table 1. Basic data of Finland and Lithuania (year 2001) (VYH 2002a, Lithuanian Water Partnership 2002)

	Finland	Lithuania	Unit
Population	5.2	3.5	million
- Urban population	4.3 82%	2.3 67%	million
- Rural population	0.9 18%	1.2 33%	million
People connected to public water supply	4.5 1) 86%	2.6 75%	million
People connected to public sewerage	4.2 1) 81%	2.3 65%	million
Water supplied by public water utilities	406	151	million m ³ /a

Note: 1) This statistic includes systems which serve more than 50 people.

2. WATER USE AND CONSUMPTION

Lithuania depends entirely on groundwater for drinking water supply. Public water companies draw their water from well fields, and in rural areas 700 000 people get their water from dug wells (Lithuanian Water Partnership 2002).

When the first large piped water supply systems were built in Finland about one hundred years ago, the source of water was surface water. Since the 1930s, and in particular during the last 30 years, the use of groundwater for public water supply has continuously increased, so that by 2000 the share of surface water had decreased to 41% of the water supplied. (Katko 1997, VYH 2002a)

In rural areas the population living outside piped water supply systems use groundwater from dug wells or boreholes in the rock. A special feature of Finland is that in rural areas, typically by lakes, there are numerous holiday residences (summer cottages) inhabited during holidays only. The total number of summer cottages is 450 000 (Kortelainen 2002). These buildings are outside population centres, and thus have to rely on their own water supply systems. Individual water supply systems have a total of 450 000 dug wells and 150 000 boreholes (VYH 2002b).

Both in Lithuania and Finland the quality of borehole water typically meets health standards. In Finland, water drawn from boreholes drilled in the rock often contains excessive amounts of iron, which as such is not a health problem but an aesthetic nuisance. The quality of water in shallow wells in rural areas in both countries is not always up to quality standards. The most common problems are contamination with bacteria and nitrogen compounds. Some aquifers in the western part of Lithuania and groundwater in a limited area in south-eastern Finland contain fluoride in excess of the recommended maximum level for drinking water. (Korkka-Niemi 2001, Lithuanian Water Partnership 2002)

Both in Lithuania and Finland the use of water is measured with consumer meters. Typically, each property is the customer of a water utility and has its own meter. There have been significant changes in water use over the years both in Finland and Lithuania (Figure 1).

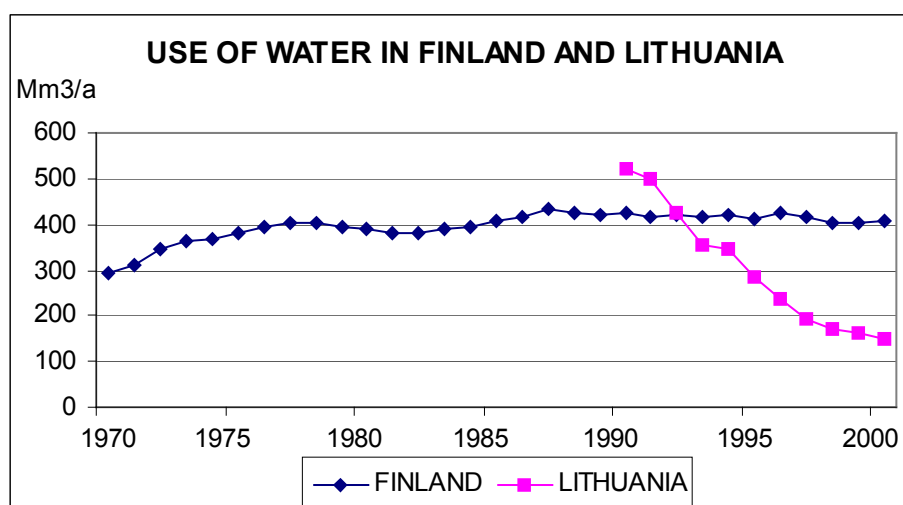


Figure 1. Supply of water by public water utilities in Finland and Lithuania



In Lithuania water use increased steadily until the late 1980s, but it has dropped dramatically since then. One of the major reasons for the decreased water use is the structural change of industry. During the Soviet period, Lithuanian industry was geared to serve the needs and markets of the Soviet Union; only limited export to the West took place. When the Soviet Union collapsed at the end of the 1980s, the markets for Lithuanian products largely disappeared, and products made according to Soviet standards were not compatible on western markets. As a result, industrial enterprises had to cut down their production, and many companies went bankrupt.

During the Soviet era, people paid for their water according to norms based on the standard of housing (Kauno diena 1999, Ignalina MEA 2000). The practice was that there was one water meter for an entire building, and the occupants paid water bills based on norms. Thus, your water bill remained the same regardless of how much water you used. In the last ten years it has become increasingly common that water meters are installed for individual flats, and that the occupants pay for the water they use according to actual usage and not based on norms.

In Finland water use seems to have remained at the same level for the last 25 years; until the mid-1970s use increased significantly (Figure 1). Yet, that seemingly smooth graph does not give a true picture of the development in Finland. Firstly, during that 30-year period, the number of people served by public water utilities has increased from 2.6 to 4.6 million people. Secondly, the use of water per capita has decreased radically during this period. The main reasons for the clear drop in per capita consumption in the early 1970s were a) the introduction of a wastewater fee in Finland, and b) the worldwide energy crisis. Before the wastewater fee was introduced, sewerage and wastewater treatment costs were covered by municipal tax income. The wastewater fee is based on the volume of water used, and when the fee was introduced, people saw their water bills double overnight. Hot water for washing purposes accounts for a significant part of the energy bill of an ordinary family. Thus, after the energy crisis and the sudden increase in the price of energy, water armatures, also cold water fixtures, have been improved to save water.

3. ORGANISATION OF WATER AND WASTEWATER SERVICES

Both in Finland and Lithuania municipalities are responsible for water and wastewater services (Water Services Act 2001, ALAL 2003). In Finland centralised water and wastewater services have been run by municipalities since the first piped water supply schemes were built in late 1800s (Katko 1997). The state has never participated directly in the provision of these services. The state has been involved in the sector as a legislator, e.g. by setting the minimum requirements for the quality of drinking water and the overall targets for wastewater treatment efficiency. The state has also supported water and wastewater schemes (mainly the construction phase) by giving grants or subsidising loans. This kind of support started only in the 1950s and has gone only outside major population centres (Katko 1997).

The Finnish Environment Institute keeps record of public water and wastewater systems, which serve more than 50 people. In 2002 Tampere University of Technology carried out a research project targeting even smaller public water utilities serving a minimum of ten people (Muukkonen et al. 2003). Measured by volume of water supplied or wastewater disposed of

the major players in Finland are municipal utilities. In Finland almost all municipalities have their own water and wastewater utility, but in some cases the networks within a municipality are not interconnected meaning that the utility operates more than one water supply or sewerage system. In 2001 there were a total of about 460 municipal water and wastewater utilities, nearly all responsible for both water and wastewater services (Figure 2). In addition to municipal utilities there are also other types of public water and wastewater service providers. In 2001 the total number of public water and wastewater utilities in Finland was close to 2 100. The most common organisational form is the cooperative, about 970 are in existence. Cooperatives are typically engaged only in water supply and serve mostly populations under 1 000 people. On an even smaller scale (serving less than 100 people) water supply is mainly organised via less formal partnerships, of which there are over 400. The owners of cooperatives and partnerships are the users themselves. Additionally, there are some 160 joint-stock companies for water only or for both water and wastewater. The shareholders of these companies are municipalities - sometimes jointly with industrial enterprises.

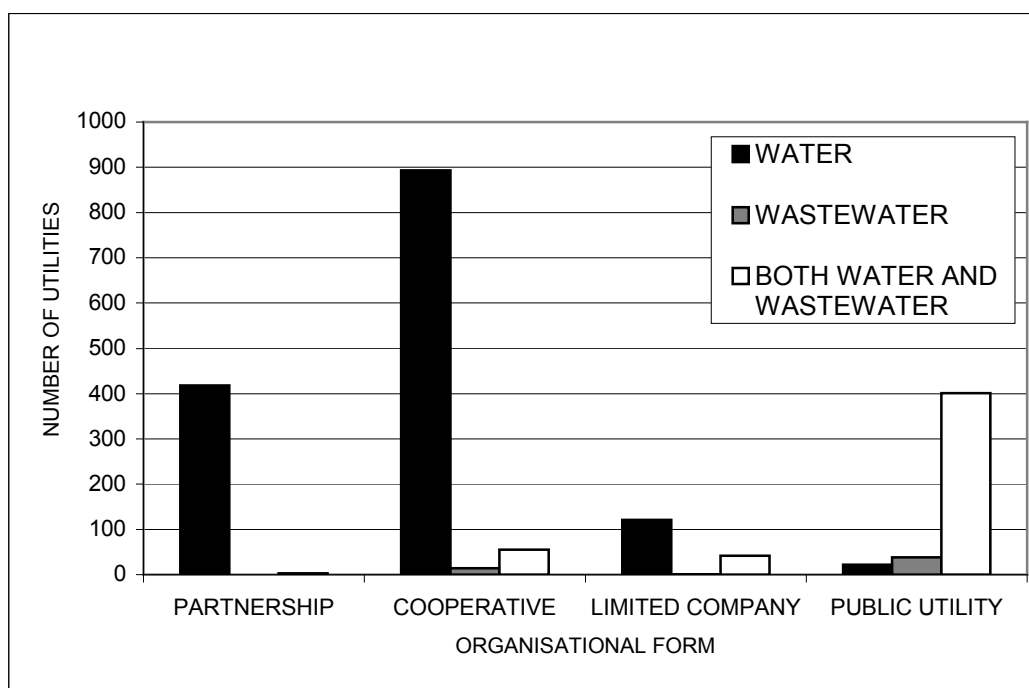


Figure 2. Public water and wastewater utilities in Finland in 2001.



Municipalities cooperate in their water supply and wastewater activities. There are close to 20 bulk water supply companies owned by municipalities (Pietilä & Seppälä 2002). The largest one is the Helsinki Metropolitan Area Water Company, which supplies water to about 1 million people (20% of the population of Finland) in 8 municipalities. Some municipalities have established a company, which takes care of wastewater treatment on behalf of partner municipalities. Recently some municipalities combined their water and wastewater activities and formed a company, which owns and operates all water and wastewater services within the area.

During Soviet rule in Lithuania (1944-1990), water supply and sewerage were state responsibilities. The state water and wastewater company had 14 regional daughter companies for the administration and operation of the systems (LTSR Komunalinio ukio ministerija 1988). Each daughter company, again, consisted of subdivisions. In rural areas people used their own wells, as they still do to a large extent. Rural areas also had collective farms which had their own water supply and sewerage systems, and in most cases also wastewater treatment. These systems were operated by the farms themselves and were not part of the state water utility.

After Lithuania regained her independence, responsibility for public water supply and sewerage transferred from the state to municipalities. Municipal water companies were established by reorganising the regional state water companies of the Soviet period. The employees of the old companies transferred to new companies as well as all technical facilities and machinery. The scope of activities and work practices remained the same to a large extent. Forty-five water companies were formed of the 14 companies and their 86 subdivisions (National control commission for prices and energy 2000). The number of companies is smaller than the number of municipalities (60) because some water companies operate the water supply and sewerage systems of more than one municipality. These municipal water companies have established the Lithuanian Water Suppliers Association (Lietuvos vandens tiekeju asociacija).

The water companies in Lithuania are independent financial units expected to operate on the income they generate. In the last ten years the use of water has dropped in many areas to one third of what it used to be. This is, of course, advantageous since there is no need to expand the systems as existing capacity suffices. But, on the other hand, it is not economical to run over-dimensioned systems. As fixed costs have been estimated to be 70 to 80 percent of the costs of water, larger than necessary systems result in high unit costs. A big problem for the finances of water companies some years ago were unpaid bills. Companies went bankrupt as people neglected to pay their water bills. Social pressure made it difficult for the companies to take tough measures to collect their bills. For instance, Klaipeda Water Company, whose 1998 billing revenue was close to 30 MLTL, had unpaid bills worth more than 10 MLTL (Klaipeda MEA 1999). In the last two years, the situation has improved significantly, and some companies are able to collect close to 100 percent of their bills.

Thus, many water companies are struggling to earn enough to keep their operations running and have hardly any funds for capital investments. And capital investments are needed, even when the systems are large enough to cope with demand. Many structures are old and need



renovation or even complete replacement. As a consequence of decreased flows, machinery is often over-dimensioned and uneconomical to run. Water quality also needs upgrading in many cases, and the efficiency of wastewater treatment has to be improved.

External funding is required for investments. One of the largest environmental projects has been implemented in Kaunas. In the mid-1990s the City of Kaunas did not yet treat its wastewaters. In 1995 a comprehensive 'Kaunas Water and Environment Project' was set up with financing from various sources. The total value of the five-year project was 94 MEUR, of which two thirds was for the construction of a wastewater treatment plant. The largest share of the costs, 54 percent, was provided by the Lithuanian government. Other Lithuanian sources were the Municipality of Kaunas (8 percent) - tariff revenue was supposed to cover 10 percent. Loans were provided by EBRD (15 percent) and NEFCO (3 percent). Grants were received from the EU's Phare Programme, Sweden and Finland (5 percent, 4 percent and 1 percent, respectively). (EBRD 2001)

The great majority (over 90 percent) of the water and wastewater services are provided by 45 municipal utilities, but there is also a large number of other smaller water suppliers (cooperatives, residential groups, agricultural companies, municipal companies, other companies, schools, etc.) bringing the total to over 1 300. In 1998 there were close to 800 wastewater treatment plants, of which 650 in the countryside. The discharges of the seven largest cities constituted about 67 percent of all discharges. (Lithuanian Water Partnership 2002)

In the mid-1990s the French multinational Suez-Lyonnaise tried for several years to get a concession contract to run the water system of Vilnius. The city council decided finally in May 1998 to keep the water and sanitation service under municipal control. (PSIRU 1998)

After independence, land was privatised and returned back to previous owners and the system of collective farms in its earlier form collapsed. Some farms continue operating in the form of cooperatives or private companies. But in many cases, at least the buildings and related production facilities, are not in use anymore, even though the farming land is used by new owners or has been rented to local farmers. In many cases the responsibility for the water supply and wastewater systems of earlier collective farms has transferred to municipal water companies. Also, in the case of some other earlier state organisations (companies, holiday resorts, schools, etc.) the responsibility for the property, and consequently also water infrastructure, has transferred to municipalities. Municipalities may have decided that the municipal water company should manage the water systems.

4. ADMINISTRATIVE AND LEGISLATIVE FRAMEWORKS

In Finland a new Water Services Act (119/2001) came into force in 2001. The act did not change earlier legislation radically. According to this act, the municipality is still responsible for organising water and wastewater services for larger concentrations of people within its area or for health reasons. Water and wastewater services include water supply and distribution, wastewater sewerage and treatment and stormwater drainage. The new Act sets uniform requirements for water services irrespective of the ownership or organisational structure of the producer of those services. A novel feature of the new legislation is that environmental reasons may also be grounds for the development of water sector services.

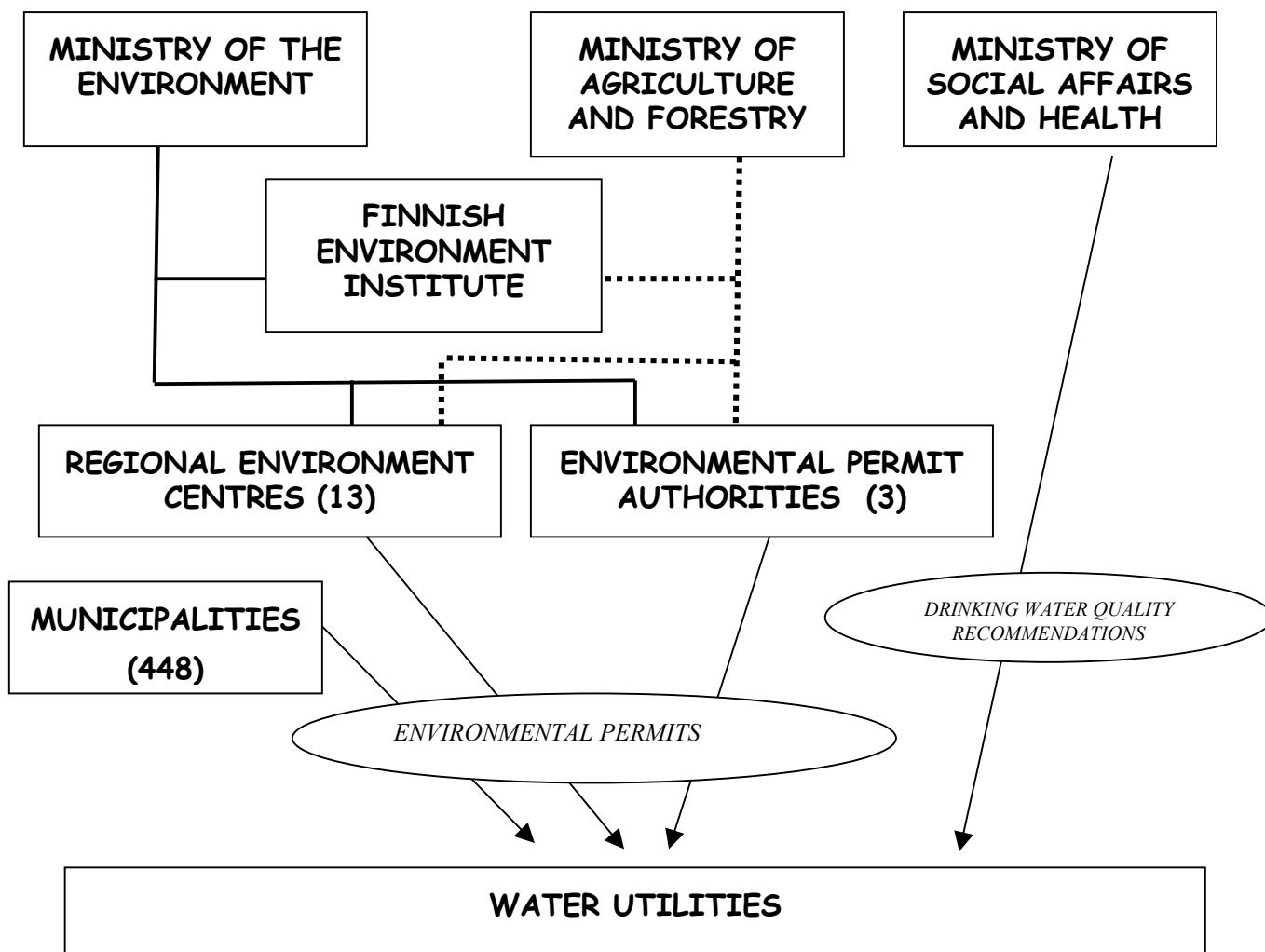


According to the act, the municipality has to define the area to be covered by water and wastewater services. The water distribution, wastewater sewerage and stormwater drainage areas do not need to be identical. Normally water distribution and wastewater sewerage cover approximately the same area, while, in particular in smaller towns, the defined stormwater drainage area is much more limited. Within the defined area the municipality has certain legal obligations to provide the services, and property owners are also obliged to get connected to the services.

The new Water Services Act puts more emphasis on water and wastewater services outside built-up areas (outside the area defined to be covered by the services). The municipality is responsible for the development of services also in these areas even though the municipality does not need to provide the services.

The Environmental Protection Act (86/2000) stipulates that a permit is required for discharging wastewater. Which authority issues the permit, depends on the scope of the activity. Municipal authorities have the right to issue permits for systems up to 100 person equivalent. Permits for wastewater discharge of 100 to 4 000 person equivalent are issued by the Regional Environment Centre, and for larger systems by one of the three Environmental Permit Authorities. The permits do not include any basic pollution charges or penalty payments if the limits are exceeded.

There is no natural resources usage fee for abstraction of groundwater or surface water. For abstraction of groundwater in excess of 250 m³/d a permit is needed - also for smaller volumes if the water is not withdrawn from one's own land (Water Act 1961). The permit issuing authority is the Environmental Permit Authority.



— overall supervision and pollution control
 supervision of use and management of water resources

Figure 3. Water sector authorities in Finland

In Finland, at the ministry level, water sector responsibilities fall mainly under the Ministry of the Environment and the Ministry of Agriculture and Forestry. The Ministry of the Environment oversees the activities of the Finnish Environment Institute and Regional Environment Centres and is in charge of pollution control. The Ministry of Agriculture and Forestry is responsible for the use and management of water resources. The Ministry of Social Affairs and Health also gives recommendations for drinking water quality, and the Office of Free Competition within the Ministry of Trade and Industry oversees economical aspects also in the water sector. (Vehmaskoski 2002)



Traditionally, the regulatory system in Finland has been fairly lean, and municipalities have in practice been largely self-regulated. Here, we have less legal constraints than in the European Union member countries on average.

In Lithuania, the Ministry of Health together with the State Food and Veterinary Service is responsible for controlling the quality of drinking water. The Ministry of Environment is responsible for the regulation and sustainability of water resources and the regulation of environmental pollution (Spokas 2000).

A permit is required for the abstraction of both surface water and groundwater (Law on taxes on state natural resources 1991). A tax has to be paid on the water abstracted - in 2000 the tax on groundwater for domestic use was 0.01 EUR/m³ and for industrial use 0.024 EUR/m³. The process industry had to pay 0.0016 EUR/m³ for abstracted surface water and the power industry also had to pay a small tax on the use of water for cooling. (Speck et al. 2001).

All industries must have environmental permits, and have to pay taxes and fines for the environmental pollution they produce (Law on pollution tax 1991, Law on water 1997). Even municipal water utilities have to pay environmental pollution taxes when they discharge wastewaters into the environment. There are two kinds of pollution taxes: a) a tax for discharging pollution into nature, and b) fees for exceeding the permitted limits. Allowed discharges of pollutants are stated in the environmental permit. An enterprise has to pay a pollution tax for its discharges even if the load is within the permitted limits. Should the pollution load exceed the limits, the company has to pay a fine for exceeding the limits. The fine per tonne of pollution increases progressively. (Law on pollution tax 1991) The taxes are paid to a special Environmental Protection Fund by the organisation, which actually discharges wastewaters into nature; so, if a plant is connected to a municipality's network, the utility pays the tax, but collects the tax ultimately from the plant.

Municipalities are responsible for implementing the laws related to environmental protection, developing and implementing local environmental programmes, and allocating funds for environmental protection purposes. Furthermore, they are responsible for screening environmental permits before they get final approval from the Regional Environmental Protection Department, exercising control over permits and stopping the operations of a company that fails to observe permit conditions. Environmental permits have been until recently issued for only one year at a time, but now they are also issued for longer periods. For instance, the city of Klaipeda (population 200 000 people) has about 250 companies which need environmental permits, and the city's environmental department has handled about 150 permits annually (Berankiene 2001, ALAL 2003).

In 1998 an independent economic regulator of the water sector, a water department under the National Control Commission for Prices and Energy, was established in Lithuania. Lithuania is the only Central or Eastern European country that has established this kind of independent regulator for the water sector. The reason for transferring the water sector's regulatory functions to a non-political institution was the significant increase in water prices. The regulator was given the task to revise investment projects in order to optimise the needs. (National control commission for prices and energy 2000)



5. ENVIRONMENTAL LOADINGS AND STATE OF SERVICES

Wastewater from most of the population centres in Lithuania is treated. According to the Lithuanian Environmental Ministry's information, 20 percent of wastewaters are still discharged untreated or only mechanically treated. (Lithuanian Water Partnership 2002)

In September 1988 the Ministers of Environment of the Baltic Sea States decided that anthropogenic loading to the Baltic Sea should be reduced by 50% from the 1987 levels by the year 1995 (The 1998 Ministerial Declaration). An assessment of the achievements (Lääne et al. 2002) suggests that regarding point sources, the 50 percent reduction target was achieved for phosphorus by almost all the Baltic Sea States, while most countries did not reach the target for nitrogen. Table 2 summarises the results for Finland and Lithuania.

Table 2. Point source phosphorus and nitrogen loads in Finland and Lithuania between the late 1980s and 1995 (Lääne et. al. 2002)

		PHOSPHORUS		NITROGEN		unit
		Finland	Lithuania	Finland	Lithuania	
Municipal	late 1980s	450	2,210	14,500	9,700	tonnes/year
	1995	260	920	14,900	6,900	tonnes/year
	reduction	42	58	-3	29	%
Industrial	late 1980s	830	300	5,800	2,000	tonnes/year
	1995	360	170	4,300	700	tonnes/year
	reduction	57	43	26	65	%
Fish farms	late 1980s	210	200	1,550	1,300	tonnes/year
	1995	160	40	1,250	300	tonnes/year
	reduction	31	80	20	77	%
TOTAL	late 1980s	1,490	2,710	21,850	13,000	tonnes/year
	1995	780	1,130	20,450	7,900	tonnes/year
	reduction	48	58	6	39	%

When comparing the loading figures above, we should keep in mind that the number of people living in the areas covered by public wastewater facilities in Finland is more than 1.5 times larger than in Lithuania. According to this table, phosphorus removal from municipal wastewater in Finland seems to be quite well established compared with the situation in Lithuania. Somewhat surprisingly there has been no improvement in nitrogen removal from municipal sewage in Finland. The good reduction results in Lithuania are partly explained by the economic recession; industries have scaled down their activities due to financial difficulties.



6. IMPROVEMENT NEEDS

In international comparison, with regard to water services, Finland is blessed with a relatively low population density, only 16 inhabitants/km², and abundant water resources. The available water resources in Finland are over 20,000 m³/a per capita (VYH 2002c). The water services infrastructure is relatively new and well maintained. Major investments, at least in built-up areas, have been made. The quality of water in piped water supply systems meets EU norms, but in rural areas many wells fail to meet the criteria. Wastewater treatment in population centres and by industry are of a high European standard. However, the watercourses in Finland are very sensitive; lakes are shallow and coastal areas are fragmented into thousands of islands. Thus very effective wastewater treatment is required to preserve water quality, and increased nitrogen removal is widely required. But the biggest challenge is the reduction of pollution from agriculture. Discharges of phosphorus and nitrogen from agriculture were in 1995 clearly larger than those from all residential and industrial point sources combined (Lääne et al. 2002).

Current legislation does not directly restrict the private sector from participating in the production of water services in Finland. Municipalities have, however, realised that water services may be a profitable business that should be managed by them. Thus, no big changes in the current practise can be expected in the near future. There will be a need to reconsider regulation if municipal water utilities are privatised.

In Lithuania water companies have been, to a large extent, 'full service' companies. They have had employees and own facilities to meet all their needs such as vehicle maintenance, metal work and welding and carpentry. Thus, they have not had much need for the services of private sector enterprises. Consequently, private sector service providers have not emerged because there have not been markets for them. In Finland the structure of water service provision is quite different. The bulk of water supply and wastewater services are provided by municipal utilities, which extensively outsource the tasks on a contractual basis, 1 - 3 year contracts in the case of operation and maintenance, and employ own staff only for key activities. Often more than 50 percent of the work is carried out by private sector enterprises. (Pietilä & Seppälä 2002)

This is one reason why the number of employees of a Lithuanian water company is far larger than that of a similar size company in Finland. For example, Marijampole Water Company in Lithuania and the Water Utility in Kokkola, Finland, are of roughly the same size providing water to 35 000 - 40 000 people. Marijampole Water Company employs ten people in its transport section including a workshop while the Kokkola Utility does not employ a single person for transportation (Pietilä 2001).

However, in Lithuania large investment projects are carried out entirely by private companies starting with feasibility studies through all the stages of implementation. If, and when, foreign funding is needed for larger investment projects, tenders are invited in accordance with international practise. Nowadays, private companies also do a lot of maintenance work mainly because water companies do not have the necessary specialised equipment or experience with new methods.



The investment needs of Lithuania's water sector are huge. Lithuania has applied for membership in the European Union, and it has been estimated that to meet the requirements of EU's drinking water and wastewater directives, 1 000 MEUR in investments will be required until 2015 (ALAL 2003). The Environment Ministry's plan until the year 2006 suggests 43 MEUR in annual investments in the water sector. Roughly half of this need is expected to be covered by foreign grants, most importantly from the EU's ISPA Programme. Some 25 MEUR in ISPA funds are expected to be granted to the environmental sector annually.

7. DISCUSSION AND CONCLUSIONS

Both in Finland and in Lithuania municipalities are by law the main actors in public water and wastewater services. Municipal companies and utilities provide the bulk of the services in both countries. In Finland, mainly in rural areas, there are also many small non-municipal systems owned and operated directly by the users.

The operating practices of municipal companies and utilities are quite different in these two countries. In Finland private sector service providers are widely used; municipal utilities out-source commonly more than 50 percent of their work. In Lithuania municipal companies still carry out almost all activities with their own staff with the exception of large investment projects. Thus, because of entirely different operating practices, it is not fair to compare the number of staff employed directly by water utilities in Finland and Lithuania.

In Finland legislation does not prevent municipal water utilities from outsourcing even the whole service; for instance concessions contracts are possible. For water multinationals, the utilities of the largest Finnish cities must be attractive, but they are generating profits and the politicians are happy with the constant income to the municipal budget from the water utility. The largest cities have no huge investment needs, and even if they did, they could get financing on better terms than a private company. Smaller utilities often have financial pressures, and their cooperation is likely to increase in the future.

Huge international water companies have shown interest in coming to Lithuania to run the water businesses of some of the largest cities. Until now, the policy in Lithuania has been that water companies will be kept in municipal ownership - not even management or service contracts have been concluded.

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