Chapter 4
The Water Load Fee of Hungary

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Abstract The chapter reviews the operation of and experience with the Water load fee (WLF) introduced in Hungary in 2004. The WLF is an effluent charge imposed on industrial facilities and wastewater utilities that discharge their effluents directly into surface water. This instrument supplements a command and control regulation that sets pollution limits and imposes fines in case of non-compliance. The chapter inspects the interaction of the two instruments, while also assessing their institutional background. The latter is important in understanding how the evolving institutional structure within a transition economy puts limits to developing efficient EPIs, while the conflicting goals and priorities of the stakeholders can further distort the design and operation of the instrument. The allowance provision of the WLF offers an example of a ripple effect generating inefficient allocation of investment resources in the adjoining market of laboratory services. The case provides an example for the different roles an EPI can play in environmental policy as a regulatory instrument to influence behaviour or an instrument to raise revenue for further defined goals based on environmental principles.

Keywords Effluent charge • Economies in transition • Environmental tax • Command and control regulation • Discharge limits

4.1 Introduction

The chapter summarizes the case study of the Water load fee (WLF), an effluent charge introduced in Hungary in 2003. The WLF had been long planned as the cornerstone of environmental regulation, but finally it was not implemented as a

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stand-alone solution, only as a supplement to the pre-existing command and control regulation. The latter was introduced in 2001 in order to comply with the EU waste water standards defined by Directive 91/271/EEC on Urban Wastewater Treatment, and the subsequent WLF was not harmonised with it, even though the two instruments are imposed on a comparable set of polluters. The resulting policy mix generated marginal environmental benefits compared to the command and control regime, with moderate changes in polluting behaviour.

After several failed attempts Act No. 89 of 2003 on Environmental Load Fees was passed in 2003 as a result of the Ministry of Finance's promotion of the bill as part of an attempt to improve the revenue source of the public budget. The act introduced three kinds of fees: an air load fee, a water load fee and a soil load fee.

The WLF is imposed on point sources and it is assessed based on the total measured amount of pollutants and the estimated damage assigned by the regulation to each pollutant. Nine contaminants are regulated: COD, phosphorus, inorganic nitrogen, mercury, cadmium, chrome, nickel, lead and copper. All polluters that discharge contaminants into surface water are required to pay the WLF. Water utility companies recover the tax through their wastewater tariffs, thus the final users of wastewater services also pay their share of the fee.

The environmental load fees had originally been envisioned by the Environmental Protection Act (EPA, Act No. 53 of 1995) to reach a complex set of goals: to encourage polluters to reduce their pollution (incentive function); to enforce the polluter-user pays principle as each unit of emission is subject to payment; and to earmark a significant share of fee revenues for the reduction of the environmental burden. As shown within chapter, these goals have been attained with various levels of success.

The case study, especially when compared to the effluent charge system of Germany (described in Chap. 3), helps to illustrate that even a single instrument can be introduced in multiple ways and with various designs, leading to materially different outcomes. Fine-tuning an effluent charge based on the targeted pollution reduction and the existing regulatory environment seems indispensable.

4.2 Setting the Scene: Challenges, Opportunities and EPIs

The transformation of the Hungarian economy in the beginning of the 1990s bankrupted the most out-dated heavy industries of the country and introduced incentives for rational resource use, manifesting itself, among others, in declining water consumption and lower effluent discharge levels. The newly built industrial facilities employed more advanced technologies, lowering the per capita environmental impact of economic growth. The impact of the upgrade of core technologies on pollution abatement, nevertheless, has its limits, and additional efforts, reducing specifically effluent discharges were needed. Moreover, the uptick of economic activities in the early 2000s generated additional pressures on the environment.

As another consequence of economic transition, a growing share of pollution originated from households, since investments into municipal wastewater treatment

plants lagged behind industrial pollution abatement efforts. During the late 2000s 85–90 % of all effluent discharge originated from the water and wastewater utilities (NRBMP 2010c), about half of which took place in Budapest which did not have its final wastewater treatment plant completed until 2010. The development of municipal wastewater treatment became the most critical measure to reduce effluent discharges.

The legacy of the economic downturn that accompanied the market transition of the 1990s created strong interests against imposing additional burden on the industry. At the same time the EU accession process and the demand of society for reduced environmental threats advanced in line with the strengthening of environmental and community regulations. These opposing forces resulted in a regulatory structure with insufficient resources and a weak mandate to exercise increased regulatory authority.

Prior to the eventual introduction of the WLF in 2004, a fundamental change had occurred in the regulation of water protection. In order to reduce effluent discharges and to be in compliance with EU requirements (91/271/EEC), the water protection regulation was completely reorganised in 2001. A new system of licensing, discharge limit values, area categories, monitoring, self-monitoring, data submission, transition periods, fines, etc. was created (Government Decree 203/2001, later replaced by Government Decree 220/2004 and its implementation decrees). In accordance with the water protection regulation, the prescribed limit values were to be fulfilled by already existing industrial facilities and wastewater treatment plants by the 31st of December 2010, while newly built facilities were subject to it immediately.

The impact assessment of this regulation envisioned a significant improvement of the environment (ÖKO Co. Ltd 2001). Altogether an approximately 30–40 % decline in the level of damage caused by industrial polluters after the expiration of the initial transition period had been foreseen.[1] The effectiveness of the regulation of discharge limits was aided by a system of fines on excess pollution. Substantial efforts to reduce pollution were already under way when the WLF was introduced.

4.3 The Water Load Fee in Action

4.3.1 The EPI Contribution

4.3.1.1 Environmental Outcomes

Pollutant emissions in 2007 were already significantly lower than their 2002 level, the decline in BOD, nitrogen and phosphorous emissions was 83 %, 50 % and 57 %, respectively (NRBMP 2010a; Ministry of Environment and Water, Government of

[1] Estimated quantities of pollutants were converted into “dangerousness units” based on pre-set rates defined by the regulation in order to create a uniform measure of damage.

Hungary 2005). While it is impossible to quantitatively separate the impact of the regulation on discharge limits and that of the WLF, a larger portion of the abatement is assumed to be associated with emission limit values, while the WLF has delivered an additional, but lower overall impact.

The WLF regulation is only applied to point source pollution and does not cover all pollutants. However, in accordance with the WFD approach, the WLF covers a number of important substances (organic matters, nutrients, and other dangerous substances). The status of the waters is also influenced by contaminants other than pollution from point sources (e.g. diffuse sources) and also other impacts (hydromorphological intervention, abstraction, and other pressures like recreation, transport, excess water diversion, etc.).

A survey on the experience of the first 2 years after the introduction of the water load fee was carried out in 2006 among public utility companies with the participation of 21 water and wastewater utilities (Bereczné et al. 2006). The survey revealed that 24 % of the companies (five water utilities) modified their development/investment plans and the technology of existing wastewater treatment as a consequence of the introduction of the water load fee. Investments to reduce ammonia, OSE, phosphorous, and dichromate oxygen were planned, entitling these companies to a reduction of WLF payment according to the provisions on rebate (for details see the next section on "Economic Outcomes" (Sect. 4.3.1.2)). It was clear, however, that the introduction of the WLF alone would not have been enough to bring about substantial investments, like the construction of a new wastewater treatment plant or a full technological upgrade of an existing one. But in conjunction with the regulation on emission limits, it accelerated pollution abatement measures. It also provided an incentive for the continuous monitoring and improvement of the existing wastewater treatment technologies in order to make them more efficient.

Due to the combined effect of the discussed regulatory changes and subsequent investments, but also other forces (e.g. improved cost recovery) the tariffs charged by water utilities increased. Consumers respond to higher tariffs by lowering their consumption, although the demand elasticity of water utility services is generally low. The average annual per capita water use declined from 39 m^3/year in 2003 to 35.9 m^3/year in 2009 (NRBMP 2010b), and a share of this decline may have been due to the price increasing impact of the WLF.

As an indirect, longer term beneficial effect on the environment, the measurement of the quality of emitted wastewaters improved as a result of the introduction of the WLF, since for the first 7 years after its introduction, the WLF regulation allowed dischargers to retain part of their WLF payment if they spent it on monitoring equipment.

4.3.1.2 Economic Outcomes

Assessing the economic efficiency of the WLF regulation is difficult for two reasons. First, as already described above, separating the impacts of the regulation on discharge limits and the WLF is virtually impossible. Second, no formal regulatory

impact assessment has been carried out since the introduction of the WLF. Prior to its adoption, impact assessments had been conducted, but not in conjunction with the regulation on discharge limits (ÖKO CO. Ltd. 2000).

The main reason for the introduction of the environmental load fee was the need to generate revenues in order to fill part of the deficit of the central budget. To shield the polluting entities from a sudden burden, the fees determined by the Act were phased in gradually. In the first few years, during 2004–2007, only an annually rising share of the calculated fees had to be paid, starting from 20 % in 2004 to reaching 100 % by 2008.

In order to promote pollution reducing activities, in certain cases the WLF regulation allowed for significant reductions of fee payments. The rationale for the reduction of the payment was that the burden falling on the organizations carrying out infrastructural investments serving environmental protection goals would be eased and they would thus be encouraged to undertake these investments. The Act on Environmental Load Fees defines circumstances under which given expenditures can be deducted from payments to the central budget as follows:

- Firms that carry out investments that cut effluent discharges directly into surface waters are eligible for a 50 % water load fee reduction during the years of the investment, up to a maximum of 5 years. This rule is still in force today.
- In the year of the purchase, 80 % of the purchase price of measurement instruments of water quality and quantity can be deducted from the WLF advance fee paid by the polluter. There has been only one substantial amendment in the environmental load fee regulation since 2004: from January 2011 this allowance is no longer available.

For 2004 budgetary income of about EUR 55.6 million[2] was planned from the WLF, based on the forecasts of the socio-economic impact assessments. Nevertheless, actual revenues were well below the expected amounts. Between 2004 and 2013 the annual income of the central budget from WLF ranged between EUR 7.5 and 31.8 million, as a combined result of increasing WLF rates, the fluctuating use of the allowances for investments and instrument purchase, and declining effluent discharge. The incoming revenue is not earmarked.

In spite of the previously mentioned incentives it was generally expected that the major wastewater treatment investments would be carried out even in the absence of the WLF regulation, especially as the development of urban wastewater treatment infrastructure was addressed in the framework of the National Wastewater Programme financed with the help of EU grants. This assumption was reinforced during interviews with several water utility service providers and their association, MAVÍZ (Bereczné et al. 2006). The 50 % WLF discount related to pollution abatement investments did not provide much incentive in itself. The low level of motivation is also a consequence of the fact that the total amount of the WLF can be passed to the users, i.e. the actual burden was borne in part by those using the service (the general population, institutions, industry). Meanwhile, due to their local

[2] 2004 current prices, exchanged from HUF on the average annual exchange rate for 2004.

embeddedness a number of water utilities tried to reduce the amount of the WLF paid by consumers, considering the poor economic position of these actors.

The situation of industrial wastewater dischargers was similar inasmuch as those emitting above prescribed discharge limit values were very likely to carry out investments independently of the existence of the WLF. As a result of the stringent water protection regulation (high fines and other sanctions), industrial dischargers are compelled to reduce their emissions.

A significant share of the water utility companies – though to different extents and with different levels of agility – took advantage of the 80 % rebate option offered by the Environmental Load Fee Act for the purchase of measuring devices. The utilities claim that buying measurement instruments was practical and beneficial – nevertheless, these claims are difficult to verify. There are contradictory opinions as well, according to which too many of these instruments were purchased by the water utilities and some of the devices were handed over to others through leasing contracts. The technical level of existing laboratories, nevertheless, significantly improved and this contributed to compliance with self-reporting requirements. The purchase allowance for measurement instruments, however, adversely affected private laboratories. It clearly had a market distorting, anti-competitive effect. Thus, on the whole, this policy resulted in a needlessly expensive and ineffective allocation of resources.

Between 2003 and 2012 the average drinking water tariff in Hungary increased from EUR 0.67 to 1.14/m^3, a 70 % rise. During the same period the average waste water tariff climbed from EUR 0.57 to 1.29/m^3, a 126 % increase (KSH 2014). Wastewater tariffs rose more steeply primarily because of the large scale investments into sewers and municipal wastewater treatment plants, with an additional, but less significant effect of the WLF being included in wastewater tariffs. At present, the WLF makes up around 0.5–11 % of the average sewage tariff with large variations among water utility companies, settlements and service users. There are multiple reasons for this wide range: the level of the WLF burden itself differs, for some utilities it is just a few euro cents per cubic meter, while in some cases it reaches EUR 0.15/m^3. Wastewater tariffs themselves also largely vary. In 2009 the average non-household sewage tariff was 43 % higher than the average household tariff, while a 23-fold difference was observed between the lowest and the highest sewage tariff within the country.

In sum, the WLF was introduced primarily with the goal of revenue generation and it has more or less fulfilled this role, even though environmental load fee revenues did not reach the originally intended level. The WLF provides limited incentives to reduce effluent discharges. The fee level and the structure of incentives provided by the regulation are not sufficient to trigger large scale pollution abatement investments, but they can have a role in optimising technical processes in order to reduce emissions. While no formal assessment of the WLF scheme has been carried out, it is widely assumed that the economic efficiency of this instrument is mediocre at best.

4.3.1.3 Distributional Effects and Social Equity

The main stakeholders and social groups affected by the WFL are the general population (households), wastewater utilities and business entities.

Water utilities are responsible for most of the WFL payment. Altogether, in 2005 municipal wastewater treatment amounted to 90 % of the total WLF revenue. The fee liability amounted to 1.5 % of the revenue and 26 % of the after-tax profit in the public water utility sector, but this was still before the Budapest Central Wastewater Treatment Plant started to operate (NRBMP 2010c).

Theoretically, water utilities are only intermediaries, since they collect the WLF from users and pay it into the central budget. However, most water utilities make steps to decrease their effluent discharge and thus lower the WLF obligation and this way reduce the burden falling on their customers.

As a result of the system of allowances for pollution reducing investments and the purchase of measurement instruments, water utilities, nevertheless, also benefited from the introduction of the regulation.

The majority of WLF payments originate from the consumers using public sewers as they pay their service providers a WLF surcharge within the wastewater bills – most water utilities pass their WLF costs to their customers. The service provider then transfers the collected fees to the central budget. As already mentioned, the WLF component makes up between 0.5 % and 11 % of the wastewater bill, depending on the settlement.

The national river basin management plan contains an analysis on affordability of drinking water and sewage services (NRBMP 2010b). According to this in 2009 water and sewage costs amounted to 3.4 % (water price: 1.8 %, wastewater price: 1.6 %) of the average net household income in Hungary. Naturally, these figures vary significantly from region to region. Despite the level of their drinking water consumption being only 70 % of the national average figure, the average burden of the population in the lowest income decile is 6 % of their income, spending 3.2 % of their income on drinking water and 2.8 % on wastewater.

Medium and high income households are unlikely to be notably affected by the WLF. Low income households in areas where the WLF makes up more than just a trivial portion of the wastewater bill, however, may be adversely affected, occasionally supplying themselves from – often polluted – groundwater sources, instead of relying on the public utility water supply, thus creating health risks.

For industrial facilities the WLF has increased the costs of production and thus influenced the total amount of profit at a rate that depends on the market situation. In 2005 industrial facilities directly discharging into surface water – as opposed to the public sewer – had an 8 % share in total WLF payments. In the same year, when the payment obligation was only 30 % of the total fee, the WLF amounted to 0.005 % of net industry revenue and 0.07 % of profit (NRBMP 2010c).

The sectors were affected differently by the regulation. According to the preliminary social and economic assessment (ÖKO Co. Ltd. 2003), compared to the sector

level GDP the following sectors were affected to a higher degree than the average: fisheries, the wood-working industry, food industry, metallurgy, metal-working and the chemical industry.

Industrial facilities discharging into the public sewer or directly into surface water need to be distinguished. The latter can directly control their discharges and therefore the WLF payment, while the former depend on the technology and abatement efficiency of the public wastewater treatment plant.

Finally, the introduction and implementation of the WLF raised awareness in relation to the theme of water pollution and the Polluter Pays Principle (PPP). This principle was accepted by the industry, the water utilities and the public, and the level of environmental awareness has increased in the past 10 years, especially in the early years of the scheme.

4.3.2 The EPI Setting Up

4.3.2.1 Institutions

It is important to briefly review the institutional background of the WLF, as it considerably impacts the efficiency of this policy instrument.

The system of the central environmental and water administration and the regional organizations – directorates, inspectorates (authorities) – has been changing continuously since the transition period in 1989. After each change of government, and often even during government terms, new rounds of radical organizational restructuring (splits and mergers) have taken place. These changes generate uncertainty in the affected organizations, strengthen the dependence of regional entities on the headquarters that are also constantly reorganised, and weaken the enforcement of the regulation.

The regionally competent Inspectorates for Environment, Nature and Water – there are ten inspectorates in Hungary – regularly monitor wastewater emissions according to the applicable rules[3] by means of sampling and on-site control.

At the ministerial level, until 2010 the WLF had been under the direction of the Ministry of Finance. Today, the Ministry of Rural Development is responsible for environmental protection. Taxation duties related to the WLF are carried out by the National Tax and Customs Administration (NTCA).

The inspectorates audit the emission data. In the course of monitoring, if disparities are found in the submitted data, the NTCA is informed. However, practice shows that the NTCA is concerned only about the tax revenues, but it is not really interested in environmental monitoring. In practice, the inspectorates do not seem to be aware that the emission data serves as the basis for calculating the WLF payments. The NTCA's monitoring power only covers payments, the schedule, and, in

[3] MoEW Decree No. 27/2005 (6.12.) on the detailed rules of the control of used and wastewater discharges.

particular, the verification of allowances and exemptions. This indicates that in reality the WLF (along with the air load fee and the soil load fee paid by enterprises) function(s) as a tax.

Most settlements are served by municipally owned water utilities.[4] Under the present scheme of the financing system for infrastructure and development the municipality invests in infrastructure and other assets, and the water utility is responsible for operation and maintenance. In practice, the financing of pollution reducing infrastructure development depends on limited state and/or EU resources, municipalities do not have sufficient own resources for this purpose. Since funds for investments are frequently not available, neither the municipalities nor the water utilities are in a decision-making position when it comes to large scale pollution abatement as a response to the WLF regulation. In case of water utilities therefore the incentives of the WLF are usually limited to low cost amendments of existing wastewater treatment technologies in order to improve their efficiency.

4.3.2.2 Transaction Costs and Design

The costs of introduction were covered partly by the public administration, partly by the wastewater emitters (water utilities and industrial plants). However, the final cost bearers are those using the public wastewater utility: the general population and industry.

The obligations to submit emissions data and carry out self-monitoring are required by the regulation. The polluters are required to report their actual emissions and to fulfil their payment obligation. As a consequence of the obligation of self-monitoring, the cost of the establishment and operation of a laboratory, or alternatively, the cost of hiring an external contractor, needs to be covered by the polluter. The purchase of measuring devices did not fully require the resources of the dischargers, since 80 % of the costs was financed from the WLF allowances. Nevertheless, even if polluters did not have to devote additional resources to measuring instruments, this still counts as a transaction cost from the perspective of the WLF.

The introduction of the WLF-related regulation also led to a minor, operational change for water utilities. It required the modification of the pollution registry and the accounting system and changes in the internal rules of operation. The nature of the task required the co-operation of the technical staff, examination laboratory and the financial department. In general, the data collection and management tasks did not require additional employees and the supplementary cost is not significant.

The National Tax and Customs Administration (NTCA) acquired additional responsibilities: the development and introduction of a WLF declaration form, data processing, monitoring, etc. No information is available on these expenditures.

[4] The rest, about 28 % of the population is served by five large state owned regional water utilities.

In order to determine the supplemental cost of the WLF system's operation, the central question is how many additional measurement and control functions are defined by the WLF regulation as compared to the command and control regulation on discharge limits. With respect to measurement, the scope of the pollutants is much wider in the command and control regulation and covers not only the nine substances affected by the WLF regulation. In accordance with the command and control regulation, the measurements must be carried out annually. In accordance with the WLF regulation, the emitters must determine and transfer an advance WLF payment on a quarterly basis. This quarterly obligation demands additional work, mostly in the form of an increased number of measurements compared to the command and control regulation's requirements.

There is no information on the actual operational cost falling on state administration. According to the preliminary socio-economic impact assessment (ÖKO Co. Ltd. 2003.), a staff of approximately 24 people are required to administer and monitor the WLF at the national level. Specific wage costs can amount to EUR 400–500,000 (2003 average exchange rate) for 24 persons annually as a consequence of the characteristics of the required professions. On top of this, job creation costs amount to approximately EUR 190,000. The total of these sums represent about 2 % of the annual revenue of the central budget from environmental load fees.

Since the inspectorates did not have a substantial enforcement role, no significant transaction costs arose for them.

4.3.2.3 Implementation

The legal basis for applying environmental load fees was established by the Environmental Protection Act (Act No. 53 of 1995) which required that an environmental load fee regulation had to be formulated and passed by the end of 1996. In order to introduce the fees, the Ministry of Environment and Water, responsible for environmental protection at the time, prepared several concepts with different versions of fee rates along with the socio-economic impact assessments and submitted the corresponding bills to inter-ministerial negotiations three times between 1996 and 2000. All of these attempts were rejected by the Ministry of Finance.

The Ministry of Finance agreed with the position of one of the main stakeholders, the Confederation of Hungarian Employers and Industrialists' (BusinessHungary), that the environmental load fee would damage competitiveness and economic profitability and was thus opposed to its introduction. MAVÍZ, the association of water utilities also raised objections, mainly because of the expected rise of wastewater prices.

Resistance within the government against the WLF diminished in 2003, when the introduction of the regulation was initiated by the Ministry of Finance and not by the Ministry of Environment and Water, with the explicit purpose of increasing the income of the central budget. Finally, Act No. 89 of 2003 on environmental load fees was passed.

In spite of the expressed interests and opinions of the stakeholders, the introduced WLF was more unfavourable for them than originally foreseen. The total level of the WLF unit fees almost doubled compared to the original concept from 2000. At the same time, the ratio that could be spent on direct pollution reducing infrastructure development decreased. Only 50 % of the fees could be spent on this purpose, compared to the 92 % figure of the original concept.

According to the initial proposal, the WLF revenue would have gone into the Environmental Fund of the State and could have been used as earmarked revenue for pollution reducing investments. Contrary to the original concept, however, the adopted regulation channelled environmental load fee payments directly to the central budget. Moreover, by 2004 the management and financial system of state environmental protection had been changed and the Water and Environmental Fund was abolished.

4.4 Conclusions

The long process of introducing the WLF provides a fitting example of the conflict between economic and environmental goals in transition economies. Originally the WLF concept was developed by the ministry responsible for the environment in order to create incentives to reduce effluent discharges. Between 1996 and 2002 the proposal failed several times due to stakeholder resistance conveyed by the Ministry of Finance. Finally, in 2003, it was exactly this ministry that embraced and promoted the WLF in order to enhance the income of the state budget. From this point on, however, environmental considerations were of secondary importance.

There was also a conflict between the goals of revenue generation and limiting the burden falling on polluters. To constrain the burden, the full WLF rate was introduced gradually in 5 years, giving time for polluters to make adjustment. This is viewed as a sensible rule. In addition, dischargers could retain part of their payment obligation if they purchased measurement instruments. This rule resulted in the inefficient allocation of resources: an oversupply of such devices coupled with a distorted laboratory market. Half of the payment could also be retained for investments that reduce effluent discharges. Monitoring the adherence to these rules generated significant transaction costs. Overall, the exemptions reduced some of the burden falling on the polluting facilities, while also lowering the WLF revenues of the central budget.

The WLF was introduced after a more stringent command and control regulation developed to meet EU requirements had already been implemented. The two instruments were not harmonised. Since both of them target effluent discharges, the independent effect of the WLF cannot be determined or quantified. In fact, since its introduction in 2004 no impact assessments have been carried out. Field experience suggests, however, that the WLF alone would not have had a major pollution abatement impact, while in conjunction with the command and control regulation it probably accelerated the realization of environmental goals.

Both from an environmental, as well as from an economic, point of view, one fundamental lesson to be drawn is that parallel regulations and double taxation (in this case fines and the WLF) should either be completely avoided, or should be introduced and operated in a harmonized fashion to fulfil well defined adjacent goals.

The sector most affected by the WLF is urban wastewater services. The national wastewater program, under which all of the municipal wastewater treatment plants have been built, was mainly financed out of state and EU sources and only to a limited extent by the municipalities. Wastewater utilities, or the municipalities owning them have not had the resources necessary to execute large scale investments that would substantially reduce effluent discharges. Actual WLF rates did not provide incentives for utilities to reduce their pollution, but even extremely high rates would have stayed ineffective due to the lack of own resources on the part of the utilities. It can be concluded that the national wastewater program and its grants had a much higher impact on effluent discharges than the WLF.

For most settlements the WLF contributed to a minor increase in wastewater prices that had already steeply risen as a result of the wastewater programme. For settlements the wastewater of which was not treated, the WLF increased the sewage tariff, which was usually below average due to the lack of treatment, by several percentage points. By now most of the collected wastewater is treated as a result of EU and government funded investments, so this disparity is not a problem any more.

The failure to harmonize the operation of the regulatory structure is an important observation. While the management of the command and control regulation on discharge limits is under the governance of the Ministry responsible for environmental protection and its regional bodies, the collection and monitoring of the WLF falls under the responsibility of the tax authority. As a result of this institutional, political situation the WLF system has been driven entirely by a fiscal perspective. Important information about the basis for the WLF fees, the amount of pollutants and operational and transaction costs, is not readily available to the competent authorities. This example clearly illustrates the outcome of the difficulties that arise in handling an environmental, emission-based regulation solely from the perspective of revenue generation.

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