

Air Pollution Fees in Slovakia¹

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Brief summary of the case

The air pollution fee in the Slovak Republic is not a new instrument; the first implemented legislation came into force in 1967. However, due to the political and economic system at that time it did not have a serious environmental impact. After the fall of the Iron Curtain in 1989, a revision of the instrument was initiated; the new Act on Air Pollution came into force in 1992. Since then, the instrument has been amended several times; the last significant amendment was made in 2008. Despite all these changes, the effect of the legislation on companies remains low. Industry – most notably energy, chemical, mining and metal companies – is a very powerful external stakeholder which has exerted influence on the legislation process on several occasions. Most experts agree that the instrument is not powerful enough at the moment (as opposed to emission limits, which seem to be a much more motivating tool) and that an independent evaluation is needed in the near future.

1 Description of the design, scope and effectiveness of the instrument

1.1 Design of the instrument

In the former Czechoslovakia, charges for air pollution were introduced in 1967. They were largely aimed at raising revenues for the state budget, and were therefore considered as fiscal revenues until 1991 (Tošovská et al., 2010). The fee was calculated individually for each source by the formula: $P = (e - ep) * h * 0.10 + p$, where:

- P - Yearly fee in Kčs (Czechoslovak koruna)¹,
- e - the actual amount of pollutants emitted in kg/h,
- ep - the permissible quantity of pollutants emitted in kg/h,
- h - the number of operating hours per year,
- 0.10 - annual amount of fee for 1 kg of emitted pollutants beyond the permissible level in Kčs,
- p - surcharge according to §2, Sect. 4 (locality of the source)

Following the political and economic changes that occurred in the former Czechoslovakia in November 1989, the charges for air pollution were re-constituted with the new Air Pollution Fees Act (311/1992). At that time, the amounts were defined in Czechoslovak Korunas (Kčs). After Slovakia became independent in 1993, the Air Pollution Fees Act was replaced by an updated version (401/1998) which introduced fees in the new currency, Slovak Korunas (SKK). In 2008, Slovakia introduced the Euro and the fees were again amended by the Act No. 515/2008. However, the amounts remained the same – they were merely converted into EUR². These fees are in force until the present day.

¹ NB: Kčs (Czechoslovak koruna) was the currency in the former Czechoslovakia.

² Using the conversion rate EUR 1 = SKL 30.126, which was fixed at the point of introduction of the Euro.

Table 1 Level of air pollution fees in Slovakia, 1992 to 2008

Pollutant	Fees		
	1992 (Kčs/t) ³	1998 (SKK/t) ⁴	2008 (EUR/t) ⁵
PM ₁₀	3,000	5,000	165.96
SO _x	1,000	2,000	66.38
NO _x	800	1,500	49.79

The Slovak legislation distinguishes between stationary and mobile sources of air pollution; stationary sources are further divided into large, medium and small-sized sources. These can be, for instance, technical units, warehouses or storage places for fuel, raw materials or products, waste dumps, quarries, or any other building, object or activity which can pollute the air (Act on Air, 2010). Specific obligations apply for 'large and medium-sized sources'; and for 'small sources': fees for the first category are handled by the district environmental office and transferred into the so-called Environmental Fund (see more below) whilst fees for the second category are handled by the municipality and are transferred into the municipal budget (Act on Air Pollution Fees, 1998). In the case of mobile sources of air pollution, notably motor vehicles, both registration and circulation taxes rise with increasing engine power and capacity. Thus, in this case, transport taxes act as an 'indirect' air pollution fee.⁶

Exemptions

Large sources for which the total fee for the given period would be less than EUR 34 are exempt from the charge. In addition, special rules apply for medium and small sources which use more than 30% of Slovak brown coal in their total consumption (this amendment⁷ was added in 2001 as a result of pressure from the Slovak mining sector⁸). In these cases, fees are calculated with a specific coefficient which reduces the fee by approximately one third.

Between 1999 and 2006, special rules applied for so-called 'Category B' polluters. These were medium and small size sources in a technical state which did not enable the keeping of emission limits (typically, factories or industry facilities with old technology). For these, fees were exponentially growing each year, multiplying the basic fee by 10 in 2005 and by 16 in 2006 (and, at the same time, enabling them to operate in spite of not keeping the limits). At this point, pressure from the industry – the chemical and energy sector, among others – became so high that Category B was completely abolished. The removal of this category was achieved with a so-called 'parliamentary amendment', meaning that the proposal came from a member (or members) of parliament and not from a government body (e.g. the Ministry of Environment).⁹

³ The Act no. 311/1992. Coll. on Air Pollution Fees

⁴ The Act no. 401/1998 Coll. on Air Pollution Fees

⁵ The Act no. 515/2008 Coll. on changes of selected Acts concerning environmental protection in the context of the introduction of Euro as a currency in the Slovak Republic

⁶ See Act no. 361/2014 Coll. on motor vehicle taxes and other amendments and additions of selected acts; and Act no. 725/2004 Coll. on traffic conditions of motor vehicles on surface road and other amendments and additions of selected acts

⁷ The Act no. 161/2011 Coll. on amendments to the Act on Air Pollution.

⁸ As interpreted by interviewee 4.

⁹ As explained by interviewee 4.

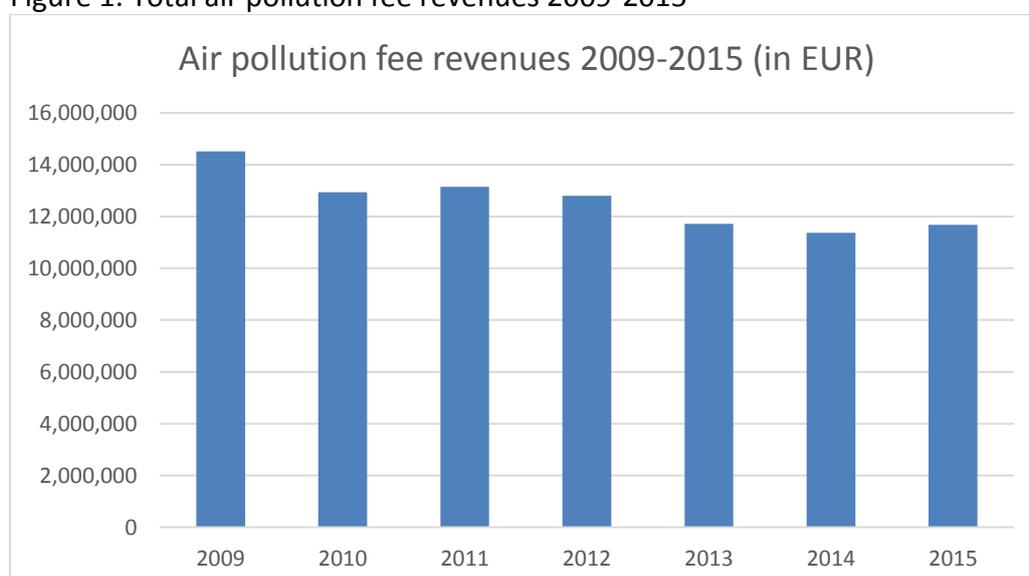
1.2 Drivers and barriers of the instrument

Before 1989, the charge for air pollution did not have any particular environmental rationale. All companies were state-owned and fees were paid into the State Fund for climate protection, but it should be noted that due to the political system at the time, there is no reliable record of how the money in this Fund was spent. The changes in 1992 led to some improvement, as society began to realise the need to reduce emissions and to introduce economic instruments to achieve environmental objectives. However, it cannot be said that there were specific environmental objectives (e.g. targets) integrated into the changes brought about by the 1992 Air Pollution Fees Act; the objective was more of a general one to improve air quality; the main driver for the instrument was a political decision by the Federal Government. In economic terms, the charge for air pollution was designed as an instrument to raise additional revenue, to be spent on environmental projects and activities. However, throughout the whole time-period, the fee rate was one barrier to success – it was not high enough to motivate companies to decrease their emissions. This situation prevails more or less unchanged until the present day (see also section 1.4 of this case study). Several of the interviewed experts offered the opinion that emission limits are a much more powerful tool in this respect.

1.3 Revenue collection and use

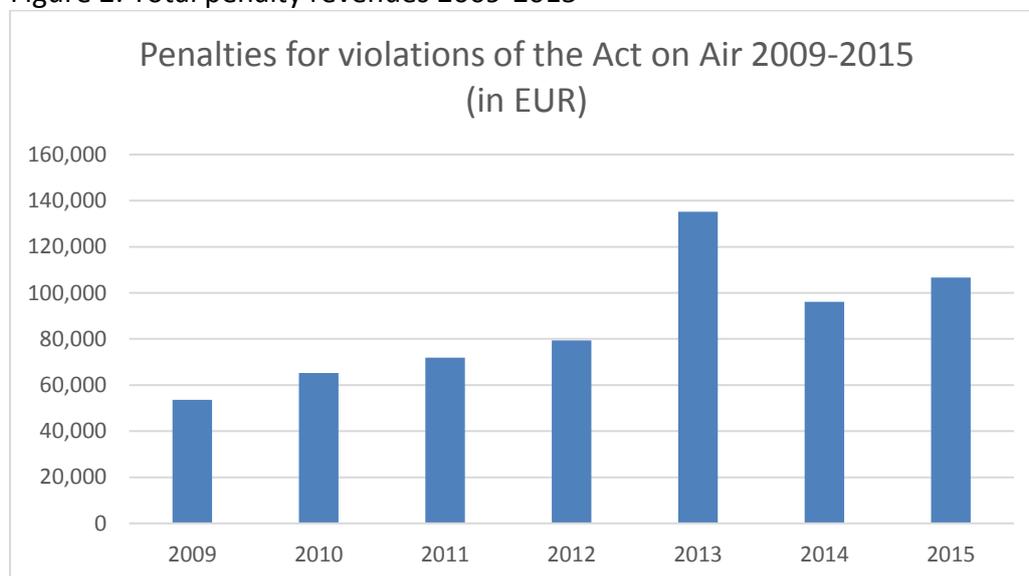
The Environmental Fund, regulated by Law No. 587/2004, is the collector of fees from large and medium sized pollution sources (fees from small sources are directly handled by municipalities). The Fund was launched on 1 January 2005, as an independent legal body managed by the Slovak Ministry of the Environment. Its main mission is to provide financial support to applicants who aim to implement environment-related projects which are in line with the national environmental policy. Fees, together with penalties for the violation of various environment-related laws, are the Fund's main sources of income. While the total amount of collected fees for air pollution has been declining in recent years (reaching EUR 11,674,311 EUR in 2015, see Figure 1 below), penalties show a modestly growing trend (reaching EUR 106,656 in 2015, see Figure 2). The Fund does not further specify which entities were sanctioned.

Figure 1: Total air pollution fee revenues 2009-2015



Source: Environmental fund (2009-2015a)

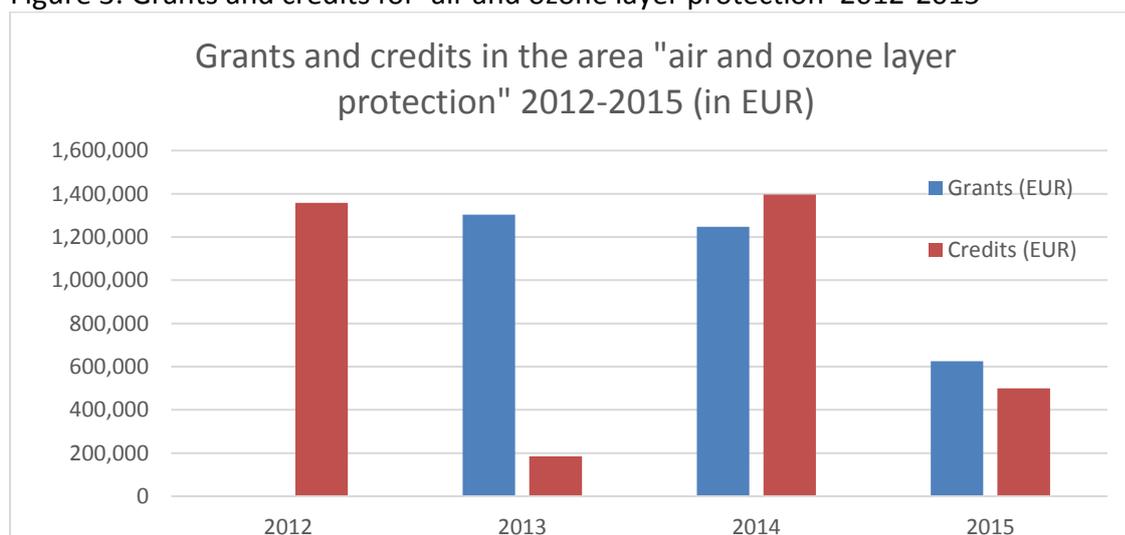
Figure 2: Total penalty revenues 2009-2015



Source: Environmental fund (2009-2015b)

The Fund redistributes the collected resources in form of grants or credits. Applicants can submit proposals in a variety of environment-related categories, one of which is 'air and ozone layer protection'. The amount of grants and credits provided for these categories varies significantly year by year (see Figure 3).

Figure 3: Grants and credits for 'air and ozone layer protection' 2012-2015



Source: Environmental fund (2012-2015)¹⁰

In 2015, the total revenues of the Environmental Fund were EUR 33,193,456, of which air pollution-related fees and penalties constituted a significant part (35.4%) (Environmental

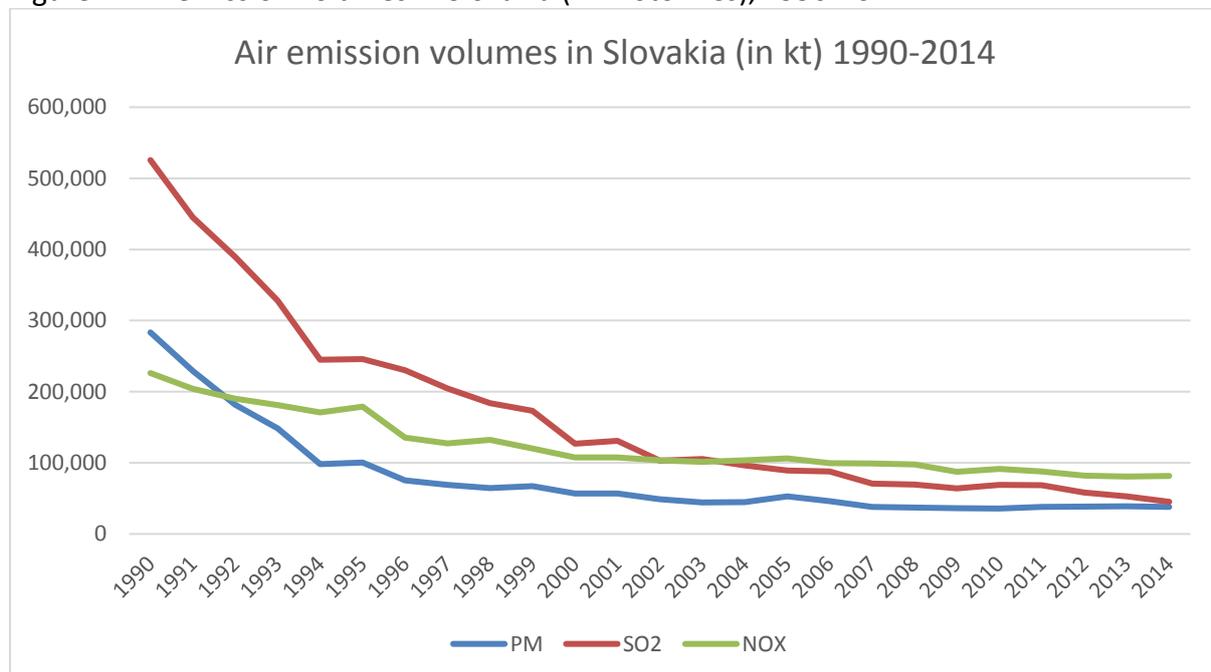
¹⁰ For Figures 1, 2 and 3, no data was available for earlier years.

Fund, 2015). About 67% of these revenues were redistributed as grants (EUR 22,283,012.81). However, of this amount, only 2.81% (EUR 625,381) were used for projects directly aimed at improving air quality (Environmental Fund, 2015). The situation was more balanced in the case of credits: from a total of EUR 1,269,247, 39% was allocated to the topic of ‘air and ozone layer protection’ and the rest to ‘protection and use of water’ (Environmental Fund, 2015). However, in the big picture, this amount is still rather small in comparison to the total revenues coming from air pollution fees and penalties. According to Interviewee 1 and 2, the relative insignificance of the issue can be explained by the fact that other issues – such as the expansion of the sewage system and the removal of illegal waste dumps – were priorities for the Ministry of the Environment in recent years, moving air protection further down the agenda.

1.4 Environmental impacts and effectiveness

The volumes of PM, SO₂ and NO_x emissions in Slovakia have been constantly decreasing since 1990 (see Figure 4). Air quality substantially improved at the beginning of the 1990s, mainly due to decreased production, or factory closures, in the heavy industry sector. Furthermore, improvements were achieved through the desulphurisation of power plants, efficient treatment of exhaust gases, reduction of black and brown coal use in factories and the introduction of unleaded petrol and catalytic converters in the automotive sector (Slovak Hydrometeorological Institute, 2014). The intensification of regulation in this area and the proliferation of environmentally friendly technologies have contributed to relatively stable levels of emissions in the past 15 or so years.

Figure 4: Air emission volumes in Slovakia (in kilotonnes), 1990-2014



Source: Slovak Hydrometeorological Institute (1990-2014)

Since the air pollution fee amounts have been constant since 1998 (the only change being their conversion into EUR in 2008), it is rather improbable that they had a significant impact on the steadily decreasing emission volumes in the same period. According to Interviewee 1, at the moment the fees are not fulfilling their function of an economic instrument, therefore

they should either be increased or completely abolished. Similar views were expressed by Interviewee 2: since the fees are too low, they do not incentivise companies to reduce their emissions; it is cheaper to pay the fees than to invest in new technologies. Notably, the largest emitters are also key economic players in the country (often owned by foreign companies). They have strong political negotiating power which they use to keep fees constantly low. From time to time, the demand emerges from civil society or in public debates to increase pollution fees; however, the typical response of large emitters is that this would cause 'economic harm' to the company or even force them to lay off employees. According to interviewee 3, there is no capacity at the Ministry to evaluate the impact of the tool at the moment, but his personal view is that the tool does not fulfil the function of an economic instrument. Emission limits are much more powerful incentives in this respect.

1.5 Other impacts

To the knowledge of the author, no systematic analysis of the economic and social impacts of the air pollution fee has been undertaken so far in Slovakia, nor is there analysis available on the optimal level of the fee. However, the grants and credits provided by the Environmental Fund can be seen as contributions to innovation, employment or economic growth. In 2015, the following activities (within the thematic area 'air and ozone layer protection') were eligible for grants (Environmental Fund, 2015):

- Support for the production of heat and hot service water using low emission sources;
- Support for the production of heat, hot service water and electrical energy using renewable sources; and
- Support for projects aimed at the improvement of air quality.

In addition to the above, three more activities were eligible for credits (Environmental Fund, 2015):

- Support for end-of-pipe technologies to reduce air pollution;
- Support for investments in clean technologies with a focus on best available technologies (BAT), usage of alternative commodities and raw materials with the effect of lowering emissions; and
- Support for activities for the substitution, collection, recycling, regeneration and disposal of ozone-depleting materials and fluorinated greenhouse gases.

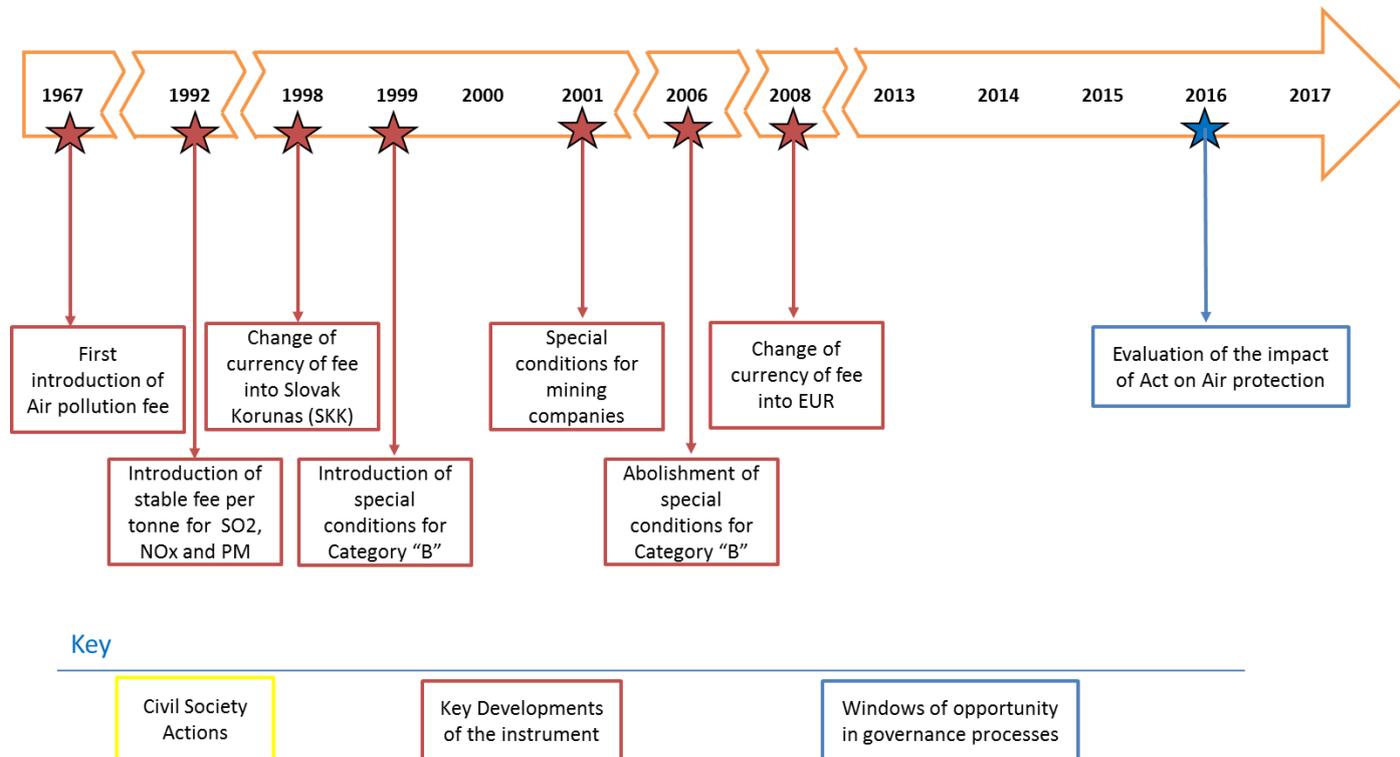
The total amount of grants and credits provided in the past four years can be seen in Figure 3. The Environmental Fund does not provide details on specific supported projects.

2 Stakeholder engagement

According to contemporary witnesses, no external stakeholders – such as civil society or academic institutions – were engaged in the inception process of the Act on Air Pollution in 1992; nor were they consulted in the context of later amendments (in general, stakeholder engagement is not a very common practice in Slovakia). The legislation was discussed merely within the so-called 'inter-resort annotation procedure', where various ministries can comment or propose amendments until the law reaches its final version.

At the same time, it is important to note that as an external stakeholder in a broader sense, industry has had the opportunity to exert influence on the legislation process. According to

interviewees 4 and 5, key players from the energy, chemical, mining and metal industry were invited to open discussions on various points of the history of this legislation. In fact, there were at least two occasions when the law was even amended due to industry pressure: in 2001 when an exception was introduced in favour of coal mining companies, and in 2006 when special obligations for Category B polluters were abolished (see section 1.1).



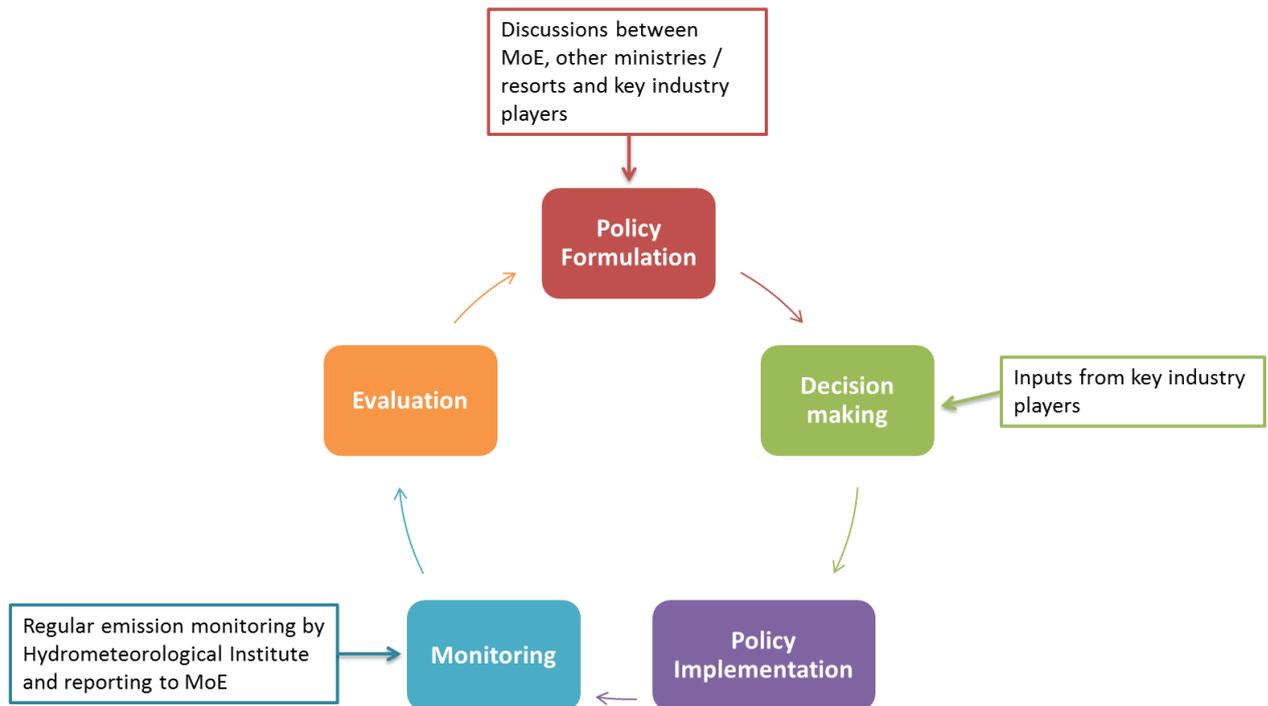
3 Windows of opportunity

Policy formulation: The Act on Air Pollution was discussed within the so-called inter-resort annotation procedure, where various ministries can comment or propose amendments, until the law reaches its final version. In addition, key players from the energy, chemical, mining and metal industry were invited to open discussions on various points of the history of this legislation.

Decision making: The decision making process takes place predominantly at the Ministry of Environment. However, key industry players ‘traditionally’ exert influence on this process.

Monitoring: The Slovak Hydrometeorological Institute is the main collector of emissions data. Hence, all future evaluations – including the evaluation of air pollution fees – will have to involve this institute.

Civil society engagement with Air Pollution Fee



4 Insights into future potential/reform

4.1 Actual Planned reforms and stakeholder engagement

Currently, no reforms of the legislation or specific stakeholder engagement activities are planned. However, interviewees from the Ministry of Environment and other organisations indicated that they would be interested in reading this analysis.

4.2 Suggestions for future reforms – instrument design and civil society engagement

Interviewee 2 offered the following thoughts on some key lessons as well as future reform potential:

Monitoring and reporting: Although data on emissions are collected and made publicly available (by the Slovak Hydrometeorological Institute), there are not enough resources for their thorough analysis and interpretation. For instance, at the moment, when air pollution reaches critical levels it is not possible to identify the exact source that is contributing the excess (industry, transport, households or transmissions ‘from abroad’). This, in turn, makes it impossible to define efficient response measures. Large emitters often deny their responsibility by claiming that the emissions are coming ‘from abroad’ or from households (e.g. by burning). The funds provided by the Operational Programme Environment 2014-2020 could be used to implement a complex and reliable data monitoring and data processing system with the capability to analyse data on a local, regional and country level.

Pollution fees: The polluter pays principle, which is a standard in the EU, is not currently effective in reality in Slovakia. Fee amounts should be higher in general (at the moment it is cheaper to pay them than to invest in new technologies) and they should be progressively increased if there is no improvement in the polluters’ behaviour.

Mobile emission sources: Road emissions should be controlled more stringently. Although the police have the necessary equipment, it is not used due to resource problems. Similarly, the emission limits for cars should more strictly enforced; currently a lot of very old cars with high emissions are still in use in Slovakia. In addition, emission tolls should be introduced for trucks using all types of roads (to avoid trucks diverting from main roads or highways to village roads).

Small emission sources (households heating): Currently, the Slovak Innovation and Energy Agency is running the programme “Green to households”, financed from the EU Operational Programme Quality of Environment 2014-2020. However, this programme supports the installation of biomass boilers which have particle emissions twice as high as those permitted by the EU Ecodesign Directive (60 mg/m³ vs. 30 mg/m³), in spite of objections and proposals from the NGO sector to go under 20 mg/m³. In addition, there is no capacity for an accuracy check of the installations currently on the market, there is a lack of public awareness campaigns on good practices of firing and incentives for proper firing.

International emission control mechanism: Ways should be sought to control cross-border emissions and to impose fees or compensation payments on polluters from neighbouring countries.

4.3 Suggestions for replicability

As no systematic analysis of the efficiency of this instrument has been undertaken, it is premature to make suggestions for its replicability.

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ⁱ This case study was prepared as part of the study ‘Capacity building, programmatic development and communication in the field of environmental taxation and budgetary reform’, carried out for DG Environment of the European Commission during 2016-2017 (European Commission Service Contract No 07.027729/2015/718767/SER/ENV.F.1) and led by the Institute for European Environmental Policy (www.ieep.eu). This manuscript was completed in December 2016.