

Public Expenditure for the Environmental Protection in Slovakia

Viktória Bobáková, Eva Mihaliková

*Pavol Jozef Šafárik University in Košice, Faculty of Public Administration,
Popradská 66, 041 32 Košice, Slovak republic*

Abstract – A right for a healthy environment is an essential human right. The Government of the Slovak Republic realizes it and it has created a sufficient legal framework for its protection. An integration into the European Union has supported the growth in the investments into environmental infrastructure, updating of environmental policies as well as a modernization of the institutions even though the pace of changes in the above spheres lags behind an economic development. This study evaluates the amount of public expenditure to be spent for environmental protection in the Slovak Republic, it identifies the main environmental spheres into which the spent expenditure flows, examines the structure of the expenditure according to the type of expenditure as well as according to an economic classification, identifies the weaknesses of the process, indicates how the allocation of the spent funds could be more effective.

Keywords – environment, environmental economics, environmental expenditure.

1. Introduction

At present, environmental problems follow mainly from an increasing population, from growing material demands of residents, from a rapid decline of irrecoverable natural resources, from a devastation of

the natural environment as well as from the disturbance of natural balance. In the Slovak Republic, despite a rapid economic growth, it was successful to stabilize or reduce the emissions of a number of pollutants. Both energy consumption and the production of a pollution for a unit of GDP remain, however, at the high level. The funds of the state budget in order to eliminate the long-term environmental burdens as well as other accumulated environmental problems prove to be limited and insufficient. As it is stated in the Survey of Environmental Performance in OECD, the problems are caused mainly by non-completion of environmental infrastructure of both towns and communities in most regions of Slovakia [1]. This is why the Slovak Republic at present emphasizes the prevention in the intentions of law and the completed system of environmental rights. It also emphasizes the measures improving the environmental quality, helping to the friendly use of natural resources, and implementing the environmentally suitable technologies and productions.

The right for a healthy environment is an essential human right. The Constitution of the Slovak Republic, in its Chapter 1 in the first part to be devoted to the basic provisions in Article 4, Paragraph 1 states: „Mineral wealth, caves, groundwater, natural healing sources, and watercourses are in the property of the Slovak Republic. Slovak Republic protects and enhances this wealth, friendly and effectively uses mineral wealth and natural heritage in favor of both its citizens and the next generations.“ The importance of environmental protection is emphasized in the sixth part of the Right for the protection of environment and cultural heritage, where it is stated in Art. 44 as follows: „Everyone has a right for a favorable environment. Everyone has a duty to protect and improve the environment and the cultural heritage. Anyone must not either endanger or damage the environment, natural resources, and cultural sights to a greater extent than established by law.

The State takes care for a friendly use of natural resources, for protection of both agricultural and forest soil, for an ecological balance as well as for an environmental protection. It provides a protection to

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Corresponding author: Eva Mihaliková,
*Pavol Jozef Šafárik University in Košice, Faculty of Public
Administration, Košice, Slovak republic*
Email: eva.mihalikova1@upjs.sk

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the specified species of free-growing plants as well as free-living animals [2].

2. Present state of problem solving

Public administration is a form of the performance of public power and it can be carried out by a State or by a self-government. In general, it consists of a set of organizational activities to be performed in the public interest by administrative authorities and other designated entities according to the law and forms established by the law [3]. Since the reform of the public administration in the year 2003, the Slovak administration is four-level in the environmental care. The highest level is represented by the Ministry of Environment of the Slovak Republic, sectoral organizations at the national level, and Slovak environment inspection. The second level is represented by eight regional authorities of environment. The third level is represented by 46 district authorities of environment. A reform from the year 2003 resulted in a transfer of some competencies from a national to both regional and district levels and delegation of decision-making to the level of communities. Thus the communities represent the fourth level of environmental administration. As a consequence of the growing importance of environmental protection, in the past decades the role of local self-government has become more important. Its importance with environmental protection is growing in other countries too [4]. The environmental care is regulated by the Act No. 525/2003 Coll. about the state administration of the environmental care. In the Slovak Republic, the state administration has been implemented to the extent set out in a set of legislation regulating the environmental protection, e.g. the fields of waste, water, air protection, protection of nature and countryside, fishery, water and sewerage systems etc.[5].

An emphasis on environmental protection is a response to the emergence of the so-called „green economics“ that is aimed at the lowering of both environmental risks and ecological deficiencies. It is its aim to expand the opportunities of national economies by means of targeted and proper policies in the field of both fiscal and social protection and to support the strong institutions to be specifically aimed at the protection of both social and ecological activities [6]. The green economics represents an alternative to the present-day dominant economic model making great both environmental and health risks, it supports an unnecessary consumption and production and it leads to inequalities.

Achieving a stable economic growth is a characteristic feature of a country's progress. The economic growth depends from the volume of

available production factors and their effective allocation. The quality of environment increasingly determines the possibilities of an economic growth. This is why the problem of environmental protection becomes more and more up-to-date and more discussed. In general, the environment can be characterized as a set of terms creating a space for the existence of life of any living creature. According to Romančíková (2011, p.15) the environment has an important role within an economic system. The environment is making conditions for life, because as a public property it provides a biological, chemical, and physical system making conditions for a life [7].

At present, this is why a number of both projects and programs deal with the protection and improvement of the environment at regional, national, and international levels. The European Commission has specified four essential spheres to which the attention should be paid as concerns the environment as follows: climatic changes, nature and bio-diversity protection, health and the quality of life and the management of natural resources and waste. In accordance with this, the environmental responsibility of countries should also be higher in order to prevent the negative externalities with an effort to minimize the adverse impacts on the environment and to implement pro-active environmental measures. Tetřevová (2017, p. 77) classifies the particular activities of environmental responsibility as follows [8]:

1. To ensure compliance with environmental legislation.
2. To enforce the internal environmental culture as follows:
 - to maximize savings of energy and other sources,
 - to minimize wastes and to support recycling,
 - to handle safely risk substances,
 - to support investments into clean technology.
3. To enforce the responsibility of external environmental measures as follows:
 - to promote the conservation of resources and natural diversity,
 - to prevent and repair the adverse impacts of the activities on the environment and the community,
 - to encourage the initiatives promoting a responsible approach to the environment.
4. To ensure the consistency with principles of a sustainable development, sustainable production and consumption, and other voluntary standards.

Economic aspects are another investigated sphere of the environment. As the environment is a public property, public budgets are involved in the funding of its protection by means of public expenditure.

Public expenditure represent the distribution and use relationships of public budgets in a budget system, they serve for funding of non-market activities of both the state and the territorial self-government [9]. Public expenditure is a tool how to influence the economic behavior of different subjects. They represent the part of the GDP to be spent collectively on a basis of a public choice.

The European Union as well as its member states allocate the amount of funds in order to achieve environmental goals. According to Mandalová (2012), it is important to evaluate the expenditure for environmental protection [10]. The expenditure has been spent for both lowering and eliminating the environmental pollution as well as for the prevention. Their following and analysis are helpful because of the evaluation and monitoring of environmental policy as well as in order to ensure the co-ordination between the policies of particular member states. In spite of the fact that some developed countries spend several per cent of their GDP for environmental protection, according to Čech (2015), the effectiveness of their use is much more important than the amount of the fund itself, i.e. a maximum possible improvement of the quality of environment should be achieved from so allocated funds [11].

3. Methodology

The expenditure for environment represents an important factor for the development of an effective environmental policy. The knowledge of the development of both investments and usual expenditure from the state budget, local self-government, and business sphere as well as knowledge of the sources of funding are helpful in the evaluation whether a sufficient amount of funds has been allocated in order to solve the environmental problems and whether the funds have been used for priority programs of the national environmental protection. The knowledge of both trends and tendencies of the development is helpful in the identification of the possible underfunding and the opportunities how to improve the effectiveness of the expenditure for the environment. It also helps to direct the governmental interventions better so to influence the financial flows in the field of environment.

According to Mlynárová and Ščerba (2017), the expenditure arising with an implementation of environmental activities by a public sector is referred to as environmental public expenditure [12]. This is the expenditure following from the protection of both air and climate, wastewater management, waste economy, protection and remediation of soil, underground and surface water, lowering of noise and vibrations, protection of biodiversity and

countryside, protection from a radiation, and research and development. In addition to the above-mentioned definition of expenditure this can be understood also in a more general way – i.e., as an economic source to be allocated for all the activities and measures which are aimed at the prevention, reduction, and elimination of pollution or other form of the environmental degradation [13]. With allocation of public expenditure for the environment, Eurostat is coming out from a functional and/or statistical classification of the expenditure of public administration as follows:

1. Waste management
2. Wastewater management
3. Reduction of pollution
4. Protection of nature and countryside
5. Research and development in the sphere of environmental protection
6. Environmental protection not classified elsewhere.

According to Bishop (2013), environmental public expenditure can be understood in a narrower sense as public expenditure to be spent by the competent authorities who are responsible for environmental care. Alternatively, in the broader sense they can be understood as environmental public expenditure to be spent at the all governmental levels together [14].

It was the aim of our analysis to consider the public environmental expenditure in a narrower sense, i.e. to be spent by the Ministry of Environment.

It is the aim of this study to evaluate the public expenditure to be spent for the environmental protection in the Slovak Republic, to identify the main environmental spheres into which the funds flow, to examine the structure of expenditure according to the type of expense and according to the economic classification, to identify the weaknesses of this process, and to present the possibilities of a more effective allocation of public funds.

The information of this evaluation is based on both primary and secondary data sources coming from Eurostat, OECD, Statistical Office of the Slovak Republic, Ministry of Environment, Ministry of Finance of the Slovak Republic.

4. Analysis and results

The environment is a public property that is necessary to be funded to a decisive extent from public budgets. In the Slovak Republic, on average, above two thirds of all expenditure of the Ministry of Environment and the Environmental fund come from EU sources including co-financing. The expenditure

for environmental protection we understand the funds for all the activities to be connected with a prevention, reduction and elimination of any pollution. It is the aim of the expenditure to maintain or to improve the quality of environment, and/or to reduce the adverse impacts.

In Slovakia, the expenditure for environmental protection is comparable with those to be spent for environmental protection by V3 countries and with the average to be achieved in European Union.

Table 1. National expenditure on environmental protection, EU-28 (euro million, % of GDP) [15]

EU, SR	2012	2013	2014	2015	2016	2017
EU % GDP	2,15	2,13	2,08	2,04	2,07	2,06
EU mil. euro	289 653	289 258	291 557	302 244	308 066	316 446
SR % GDP	1,1	1,0	1,0	1,5	1,1	1,0
SR mil. euro	802,76	755,89	794,1	1 181,18	903,86	912,65

National expenditure on environmental protection consists of a country's current and capital expenditure on environmental protection activities, including net transfers to the rest of the world.

In 2017, EU-28 national expenditure on environmental protection amounted to euro 316 billion euro. National expenditure on environmental protection grew each year by nearly 2 % on average. [15].

Table 2. Expenditure for the environment according to the source of funding (in thous euro) [16]

Expenditure according to the source	2012	2013	2014	2015	2016	2017
State budget expenditure	15640711	14819702	15420238	18166391	15256172	15234261
Sources of the chapter ME	326466	322187	236161	665840	292939	256231
Percentage share	2,09	2,17	1,53	3,67	1,92	1,68
Budgeted sources of the chapter	73151	75061	44535	89835	55742	93436
EU sources and co-financing	253240	247075	191341	160613	7555	38321
Transfer from the past years	74	50	284	415391	229641	124472

Approximately 2% of all expenditures from the state budget were the expenditures on the Ministry of Environment. In the evaluated period between 2012 and 2017, we could observe 21, 6 % decline of the expenditures of the Ministry of Environment capitol. The lowest expenditures were in 2014 because of the transition of the district offices under the Ministry of Interior of Slovakia. It was influenced by the implementation of the "Effective, Reliable and Open Public Administration" program measures that had to optimize the costs on the public administration and simplify the handling of public requests. The Ministry of Environment reached the highest expenditures in 2015, because of higher drawing funds of the European Union, as well as the usage of the non-drawing funds of European Union from the past years. These funds were used primarily on the flood control measures realization.

The following figure illustrates the development of expenditure in the terms of its source.

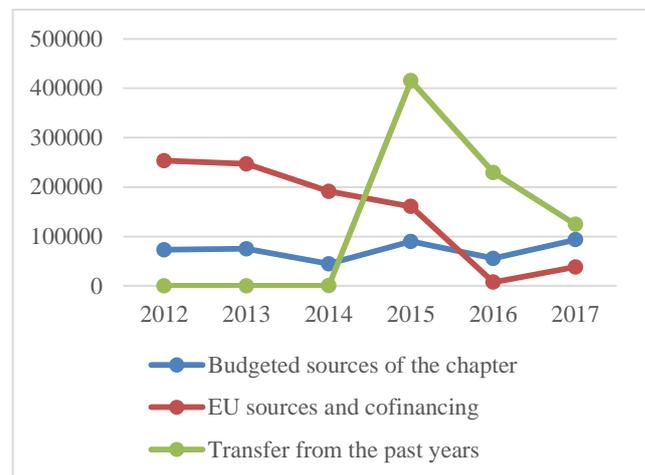


Figure 1. Expenditure for the environment according to the source of funding

The public expenditure of the Ministry of Environment has been markedly changed within the years of analysis. The smallest changes occurred in the frame of budgeted funds. The most significant item consists of EU funds, mainly from the EU Structural Funds and the Cohesion Fund. Although there has been a decline in these resources over the last three years.

The decline was due to the lack of spending of all EU funds in recent years, which led to a subsequent transfer to the following year.

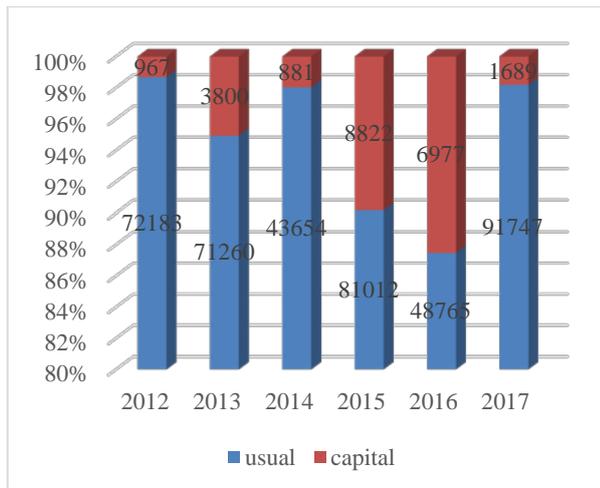


Figure 2. Expenditure for the environmental protection

From the point of view of the economic classification of expenditure, the share of capital and current expenditure has changed significantly over the past three years.

The current expenditure prevailed, from which the biggest part was determined for current transfers, mainly on flood control measures. Exceptions are 2015 and 2016 when the capital expenditures increased, due to the transition of the unused EU funds from the last year. They have been invested to the reconstruction and restoration of the property of the competent authorities and in the purchase of land in protected areas.

Table 3. Expenditure for environment according to the sphere (in thous euro) [16]

Spheres of expenditure	2012	2013	2014	2015	2016	2017
Sources of the ME	326466	322187	236160	665840	292939	256231
Water economy	164844	187834	150930	442879	186512	137313
Air protection	30293	22532	9022	47390	12927	3918
Waste economy	76377	49359	30132	81450	10580	5813
Protection of nature and countryside	17126	23717	20574	37905	15940	15754
Administration	37824	38742	25501	52214	45698	44855
Low-carbon economy				4000	21279	46003
Support for IT systems						2572

More important changes occurred within the functional structure of expenditure in the analyzed period. The highest amount of expenditure during the analyzed period was determined to the water economy. The aim was to minimize negative results related to the content of pollutants in the waste water and to increase the population's connection to public water supply and sewerage systems. Funds were used for construction of sewage treatment plants (66

plants were built in the 6 years), for the construction of public water supply systems in the number of 64 and for the extension of the sewerage network by 2412 km. This led to the improvement in the required indicators (Table 4.), although it should be noted, that Slovakia has still below-average level of connected population to the public water supply systems and sewerage network within the EU.

Table 4. Selected indicators of environmental performance [17]

Indicators	2012	2013	2014	2015	2016	2017	Change
Connection of residents to sewerage	87	87,4	87,7	88,3	88,7	88,9	1,9
Connection of residents to public water supply systems	62,4	63,5	64,7	65,2	66,4	67,7	5,3

The waste management was in the first 4 years the second field with the highest share of expenditure. Funds were used for building the infrastructure for a management and recovery of

waste, due to Slovakia has on the international scale the high landfilling rate and low percentage of recycling of municipal waste, what the following indicators also say (Table 5.).

Table 5. Selected indicators of environmental performance [17]

<i>Indicators</i>	<i>2012</i>	<i>2013</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>Change</i>
Landfilling of municipal waste	74,11	68,9	66,12	69,04	66,03	61,43	-12,68
Recycling of municipal waste	12,89	11,27	10,68	14,66	22,74	29,32	16,43

Over the last two years there has been an increase of expenditure to the low-carbon economy. It is caused by application of the European Regional Development Fund 2014 - 2020 rules requiring the Member States to set a mandatory minimum share of the available funds and to invest them into the energy efficiency in buildings, renewable energy, smart grids and sustainable urban transport and as well as to the research and development in these areas [18]. Slovak Republic reflects to this and formulated measures to support the low-carbon economy in the one of the axes of the Operational Program Quality of the Environment and develops it in Envirostrategy 2030. Expenditures to this area are rising and also budgeted expenditure has been steadily rising by the 2020.

5. Conclusion

Slovak Republic has achieved an important progress in the harmonization of its environmental regulatory framework with the commitments following from the membership in the European Union. Drawing on EU funds, investment has increased mainly in the environmental infrastructure, which has gradually led to the improvements in the environmental indicators monitored for each area. The highest share of expenditure was in the sector of the water management. The most expenditure was directed mainly for the construction of public water supply systems, sewerage networks, and for preventive flood protection measures), as it is based on views supported by the US Federal Emergency Management Agency that it is more cost-effective to prevent floods than how to eliminate their consequences [19].

Slovakia is achieving a high rate of landfilling instead of the recovery of municipal waste. This can be because of the low fees for landfilling as well as related weak motivation in order to increase the level of sorted waste. The countries with a higher fees achieve a higher recycling rate. From this it follows that this type of the environmental tax should be reviewed.

Apart from the waste problems, Slovakia faces other environmental challenges. Increased attention should be paid to the quality of polluted air and the protection of forest ecosystems, which have a significant impact on humans. Although the environmental indicators are positively growing, their pace of change is slow and lags far behind the EU.

Slovak Republic has taken several initiatives in order to reduce and simplify the administrative burden to be connected with legal instructions in the care for the environment. Further effort is needed in order to engage the business community into the dialogue about the environmental issues and to implement a proactive approach in which the environment does not represent just a threat but also an opportunity. The attention of a politics should be shifted from a creation of a structure to the implementation of environmental law. The targeted planned controls should result in a higher effectivity and flexibility in responding to the potential risks and to the higher effectivity in responding to non-compliance with instructions and the occurrence of exceptional cases of environmental hazards. Slovak Republic has worked out a complex system of informing about the environment to be based on the environmental policy. More should be done, however, in including the information about economic, financial, and social impacts of environmental policies. A higher effectivity of the funds spent for environmental protection can bring better results. The measures for higher rates of municipal waste recycling, the introduction of the innovative forms of the funding of the nature protection or an abolition of facultative exemptions in consumer taxes from electricity, coal, and natural gas can bring higher takings of the state budget.

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