



**FINANCING PRO-ECOLOGICAL INVESTMENTS BY PUBLIC FUNDS
IN THE LUBUSKIE PROVINCE IN THE YEARS 2009-2013**

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Abstract:

The article discusses the issue of financing pro-ecological investments by the public funds, basing on the example of Voivodeship Fund for Environmental Protection and Water Management in Zielona Góra in the years 2009-2013. It also defines the essence of the implementation of these investments by the regional business sector in terms of the regional development process. Furthermore, apart from providing the compilation of the basic information concerning ecological funds, focusing on the origin, division, and the rules of their functioning, the analysis of the volume of expenditure in the years 2009-2013 has also been performed in the form of individual instruments supporting pro-ecological investments of the business entities in the region of Lubuskie Province. The summary contains the conclusions and forecasts for the coming years.

Key words: *business pro-ecological investments, system of financing environmental protection, ecological fees and fines, economical instruments of environmental protection*

INTRODUCTION

The paradigm of sustainable development defined in the strategy "Europe 2020" constitutes a determinant of a long-term development in economies of the Community. Together with the observed last decade's transformation of Polish legislation in the field of environmental protection, connected with the implementation of EU standards to economic practice, enforces a compliance with more and more restricting ecological standards. Manufacturing companies as the main perpetrator of significant environmental burdens and the addressee of legislation changes regulating the relations of economic entities with the environment, were obliged to make a considerable effort directed towards ecological modernization. This transformation has required and will require considerable investment outlays into installation the protection of environment, while providing a scope for integrating economic and environmental objectives of the business. In the situation where this integration encounters barriers to implementation, the company will be forced to seek external sources of financing environmentally friendly improvements.

At present, in Poland the primary source of supporting of this kind of action are specified in the Act of 27 April 2001 Environmental Protection Law, so called special-purpose funds for environmental protection and water management. This article takes an issue of operating of the funds taking into account the analysis of their spending, focusing in particular on supporting environmentally friendly business sector investments, basing on the example of Lubuskie Province.

PRO-ECOLOGICAL INVESTMENTS AS AN INSTRUMENT OF REGIONAL DEVELOPMENT

In the literature, the term *investment* is described as a waiver of a current consumption in order to achieve benefits in the future [5]. A similar point of view is provided by Luenberger [8], who represents *the investment* as the current involvement of the certain resources due to the later obtained profits. What is more, introducing more and more restricting environmental standards, as well as same obligation to protect the nature, motivates entrepreneurs to seek for new solutions that are effective enough to enable reducing the negative impact on the environment. These proceedings encourage modernization and restructuring, and therefore support taking pro-ecological investments. Poskrobko and Ejdyś [9] define these processes as investments whose purpose is to protect the environment. According to the authors, they contribute directly to the protection of water, air, soil, as well as to the disposal of industrial and municipal waste, the rehabilitation of heaps, dumps and sediment ponds. There are two kinds of pro-ecological investments: protective investments of the end of the pipe (temporary measures) and integrated investments. The first type refers to such projects, all of which pursue the protection of the environment, and without affecting the production process they aim to reduce the formed contaminants. The purpose of the integrated investments is to limit the emissions of pollution through changes in the production process [9].

Pro-ecological investments are extremely important from the point of view of the regional development, due to

the effects they bring. Funds for pro-ecological projects affect several issues. With the help of them, positive changes concerning water and sewage management are applied. The improvement in waste management is also ensured. Enterprises are adjusted to environmental standards to have the smallest negative influence on the ecosystem [9]. As a result of these investments, there can be seen positive changes in the field of water purification and water management. After the building the new and the modernization of the existing sewage treatment plants, the growth of sewage system's productivity in the region is being observed. Thanks to these actions, including the sphere of air protection, the amount of dust and gas pollution in the atmosphere has been reduced. An important point of these investments is environmental education, aiming to show to the society how to proceed pro-ecologically. However, to perform all of these projects, the appropriate funding sources are required.

FUNDING OF PROECOLOGICAL INVESTMENTS BASED ON THE REGIONAL ENVIRONMENTAL FUNDS

In the early 90's of the 20th century, in Poland, the main role in funding projects that aim to protect the environment, was played by the ecological funding, which covered almost 40% of the investment outlay in this field. Thanks to the well-developed system and the large independence, they could be considered as an exemplary model for the funds in other countries. The ecological funds are not subsidized by the budget, because they hold their own funding sources. However, during the last few years, their significance has relatively decreased due to the lower revenues from the charges of using the environment. It has been also influenced by the reduction of the public aid and the implementation of the principles of market economy. In particular, the criticism of all of the ecological fundings subsidized from the budget has intensified, and also the attempts of liquidating most of them. In Poland, ecological fundings cover about 12% of the ecological investments, about 6% in the Lubuskie Province (Table 1).

During the last years of the twentieth century Poland made a major progress in decreasing the level of degradation of the natural environment, because it significantly reduced the emission of the pollution by up to 40-60%. Initially, it was explained by the limitation of the industrial production as a response to the economic crisis, but after 1995 it was stated, that the main reasons for these improvements were the structural changes of the industry and the intensification of the protective projects. The new

environmental policy influenced the increasing financial outlay of the environmental protection until the end of the 90's in 20th century.

Ecological funds and the assessment of their functioning

Polish ecological funds are not subsidized from the budget, therefore they differ from the most of the target funds, as well as from other ecological funds in the countries of the Central and the Eastern Europe. The source of these funds are mainly the charges for the economic use of the natural environment and introducing its modifications. The funds from the Voivodeship Fund for Environmental Protection and Water Management (WFOŚiGW) are supplied by the charges for using the environment, fines for not following the rights of the environment, but also other ecological fees. In Poland, the funds are subdivided into: national, voivodeship, and since 2009 also for district and communal.

The poor financial condition of the enterprises and new rules of billing the ecological fees have caused a decrease in the revenues from the charges and fines. The funds, which are operated by WFOŚiGW are lower than the funds raised years ago, as more businesses follow the compulsory ecological criteria. The new environmental law and decentralization of the management system imposes an obligation on entities using the environment to keep the records of pollutants and to determinate the amount of the due fees [4].

The ecological funds as the source of supporting the pro-ecological investments based on the example of the Lubuskie region.

Voivodeship Fund for Environmental Protection and Water Management in Zielona Góra was appointed to support projects in the fields of ecology as an independent financial institution. The core business of WFOŚiGW is financing, mainly investments, which aim in environmental protection and water management along the lines of the national environmental policy and the environmental objectives arising from the strategy for sustainable development of the Lubuskie Province. The principles, organization and operation of the Regional Fund is determined by the statute granted by the Board of Lubuskie Voivodship [6].

The Fund allocates financial help for environmental protection tasks from the following sources:

- revenues from fees for the use of the environment and fines,
- proceeds arising from lending activity of the Fund,
- inflows resulting from operations conducted by the capital transaction Fund.

Table 1

Investment outlay for environmental protection in the Lubuskie Province, according to funding sources during 2009-2013 (current prices)

SPECIFICATION	2009	2010	2011	2012	2013
Total in thousands of PLN	275174.3	232667	225575.9	206418.6	218627.2
Total %					
Own sources	50.5	43.3	43.2	36.7	31.0
Budget funds:					
- national	2.3	1.5	6.3	0.2	0.7
- Voivodeship/provincial	0.6	0.4	-	-	-
- district/county	0.01	0.4	0.2	-	0.01
- communal	2.2	0.7	3.8	1.6	0.8
Funds from the abroad	9.5	32.8	29.0	48.5	50.6
Ecological funds (loans and grants)	9.1	6.0	3.3	0.6	6.3
Loans and domestic loans (including bank loans)	24.5	14.4	11.4	11.5	10.1
Other funds including unfunded expenditures	1.3	0.6	2.7	0.9	0.5

Source: *Ochrona środowiska w województwie lubuskim w latach 2009-2011 (US Zielona Góra); Ochrona środowiska (2013, 2014 GUS, Warsaw) [2, 3, 10].*

The fund provides financial assistance for environmental investments in the form of loans and grants for water conservation, air, soil, wildlife, water management, environmental monitoring, extraordinary environmental threats, ecological education. The basic form of support are loans. When selecting and assessing applications for financial assistance, fund is guided by *The criteria of project selection co-financed by the Fund*, while financial assistance is based on *The general rules for the applicants for the financial support from the Fund, Principles of granting and amortizing loans and grants* – documents adopted by the Supervisory Board of the Fund. "At the same time, due to the many years of experience in environmental financing the Fund was assigned tasks in the Lubuskie Voivodeship, which were related to handling the EU funds allocated for this area. For the 2007-2013 financial perspective the tasks of the Fund included participation in two programs:

- Operational Program Infrastructure and Environment in the role of Implementing Authority (intermediate secondary education) in the area of two priorities: I – The water and Sewage Management, II – The waste management and protection of the earth,
- Lubuskie Regional Operational Program in the role of the Intermediate Body Priority III – The preservation and management of natural environment" [6].

The essence of WFOŚiGW operation determines the Act of 27.04.2001. The Environmental Protection Law, which takes into account the changes resulting from the Act dated 20.11.2009 r. Amending the Act – Environmental Protection Law and other laws. The members of WFOŚiGW are legal persons within the meaning of Art. 9 Section 14 of the Act of 27 August 2009 Public Finance (Dz. U. No 157, item. 1240).

The aim of the voivodeship funds is to finance the activities that protect water, air, soil, prevent the noise and reduce the disposal of industrial and municipal waste. "The law defines also the basic organizational framework of provincial funds, as well as the financial management principles. The financial resources, that are available to voivodeship funds are public funds within the meaning of the Act of public finances, and therefore the financial aid must be taken into consideration the principles contained in the Act" [7].

THE ANALYSIS OF SPENDING FUNDS FROM THE SYSTEM USING DIFFERENT INSTRUMENTS IN THE YEARS 2009-2013

In the framework of its statutory, Voivodeship Fund for Environmental Protection and Water Management in Zielona Góra in the years 2009-2013 concluded 312 contracts for a total amount of approximately PLN 151.4 million (Table 2). Over the next 5 years, the number of contracts has doubled from 42 to 97, and the spent amount increased from PLN 13.5 million to 44.1 million, meaning an increase of 226.0%. The only year in which the number of contracts and resources allocated to the loan or grant decreased, was the year 2011. The largest increase in expenditure occurred in 2010. While in comparison to the previous year the amount rose by approx. 96%. The highest growth in the number of contracts took place in the last year of analysis (by 64.4% comparing to the previous year).

During these years the largest number of measures in the Lubuskie Province was allocated to the sewage management and water conservation: yearly approx. 80% of the total expenses (Fig. 1).

Table 2
Agreements for financing pro-ecological investments entities from across the Lubuskie Province concluded with the Voivodeship Fund in 2009-2013)

SPECIFICATION	The number of concluded agreements	The amount of agreements [thousands of PLN]	The indicators of the pace change	
			Concluded agreements	The amount of the agreements
2009	42	13543	x	x
2010	68	26580	0.619	0.963
2011	46	26228	-0.324	-0.013
2012	59	40882	0.283	0.559
2013	97	44149	0.644	0.080

Source: own study based on WFOŚiGW reports.

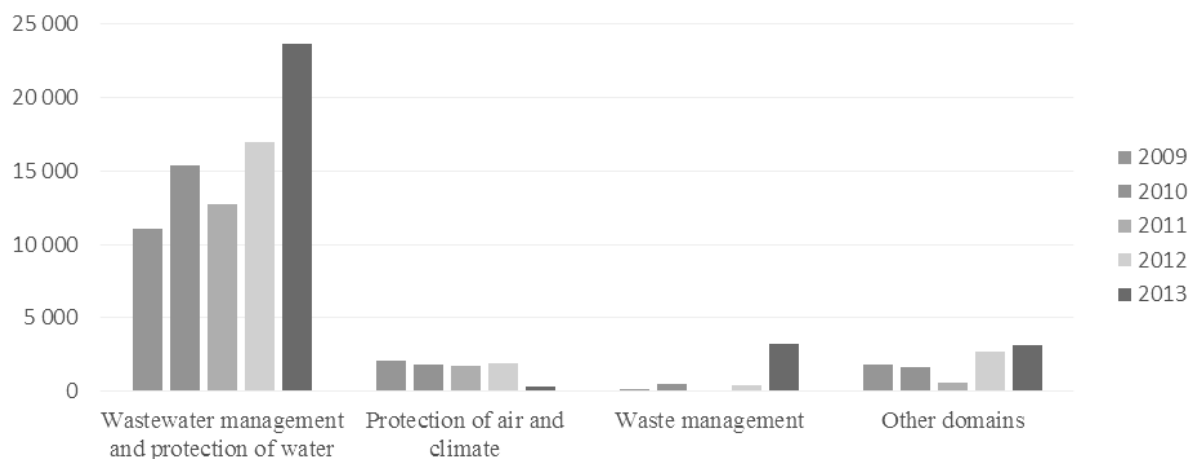


Fig. 1 Financing the environmental protection in the Lubuskie Province by sectors [thousand PLN]

Source: own study based on data from the NFiSiGW for the period 2009-2013.

To the largest investments co-financed by WFOŚiGW in Zielona Góra belong, inter alia, a complex solution of water and sewage management for the urban Szprotawa (the project's value is PLN 106.9 million), ensuring proper wastewater management in the cities and villages of Lubusko (the project value is PLN 54.4 million), expansion and modernization of the Waste Utilization Plant in Gorzów Wielkopolski. (the project's value is PLN 24.9 million).

What kind of a problem for the local government in Lubuskie Voivodeship is a wastewater treatment, might be exemplified by the public health care units. The results of a survey conducted in 2012 show that among the 65% of public hospitals subordinate to the Marshal Office of the Lubuskie Province, only 20% of the surveyed medical units confirmed to have their own sewage treatment plant, while 40% of discharged effluents directly into the municipal sewer system without using any forms of their purification. It could be a potential bacteriological threat, which could lead to epidemics. At this time, other entities were getting rid of the sewage into hospital septic tanks [1].

The main directions of financing are loans and non-repayable forms: grants, cancelling the debts and interest rate subsidies on bank loans.

During the last year of the analyzed period, the expenditures linked to the waste management had significantly increased. It was probably connected to the modernization and the adjustments of the communal installations, for the change in the system of the waste management. The amended Act on maintaining the cleanliness and order in the municipalities has introduced the changes in the process of managing the waste collected from our homes; it has allowed the selective collection of waste. However, the efficiency of the waste management system will still be dependent on the attitude of the regional inhabitants and their commitment to the waste segregation "at source".

The Fund allocates grants for the following purposes:

- environmental education,
- water management,
- soil protection and waste management,
- environmental monitoring,
- extraordinary environmental threats,
- environmental protection.

In contrast, loans are allocated to:

- protection of water,
- protection of air,
- soil protection and waste management,
- water supply.

In 2009 the Fund entered into 42 contracts, including 13 contracts of loan and 29 of grant agreements for a total amount of PLN 13543438.76. 22 loans in the amount of PLN 834.6 thousand, were implemented by the Environmental Protection Bank SA. WFOŚiGW paid the interest rate a total of PLN 13698.82. On wastewater management and water conservation it was allocated PLN 11.019 million, whereas, for the protection of air and climate it was transferred PLN 2.041 million. PLN 4500 was spent on waste management, and for other purposes the expenses were PLN 1.818 million.

In 2010, 68 contracts were signed, of which 22 were loan agreements, 45 grant agreements and 1 subsidy to interest agreement on the loan for the amount of PLN 26579828.12. The funds transferred to wastewater management and water conservation increased by 39.7% and amounted to PLN 15.398 million. The protection of atmos-

pheric air and climate was allocated 10.3% less funds than in the previous year and amounted to PLN 1830000. The amount of money spent on waste management amounted to PLN 462000, which means that it increased about 84 times. For other expenses transferred PLN 1.659 million, namely the amount of funds compared with the year 2009 increased by 8.7%.

In 2011, 10 loan agreements were signed, 32 grant agreements and subsidy contract in the number of 5. On wastewater management and water conservation it was allocated PLN 12695000 or 17.5% less than in the previous year. Expenditure on the protection of atmospheric air and climate totaled PLN 1.707 million or about 6.7% less than in 2010. Other expenses accounted for PLN 552000. Compared to the previous year, the decline in the amount of allocated to them by 66.7% may be observed.

In 2012 it finalized a total of 59 contracts in the amount of PLN 40882347.67, of which 11 loan agreements, 38 grant agreements and 9 funds transfer agreement. The expenditure on wastewater management and water conservation allocated PLN 16.937 million, 33.4% more than in the previous year. The protection of the atmospheric air and the climate forwarded by 9.4% more than in 2011, namely PLN 1.868 million. Expenditure on other activities amounted to PLN 2.659 million, 381.7% more comparing to the previous year.

In 2013, 97 applications were finalized, of which 19 loan agreements, 73 grant agreements and 5 subventions for a total amount of PLN 44148984.61. Expenditure on wastewater management increased by 39.5% and amounted to PLN 16.937 million. The protection of the atmospheric air and the climate allocated PLN 3.204 million. The expenditure related to waste management allocated PLN 3.204 million, which means an increase comparing to the previous year by 703.0%. Other expenses amounted to PLN 3.082 million, 15.9% more than in 2012.

CONCLUSION

Basing on the above data and the analysis of the expenditure of the Voivodeship Fund for Environmental Protection and Water Management in Zielona Góra, it is easy to notice that in the analyzed period, the main emphasis in financing environmental investments of companies from across the Lubuskie Province was put on improving their relationship with the environment in the area of water and sewage management. It is expected that this trend shall be maintained in the coming years, together with the transfer of a part of the funds on the waste management. This hypothesis can be withdrawn basing on the significant increase in the amount of money for this purpose in 2013, compared with the year 2012. The data analysis revealed the amount of money allocated to this sphere was seven times greater. It may also be seen a decline in the growth rate of the total amount of money flowing into the system, which WFOŚiGW in Zielona Góra spends on grants and loans. If this situation continues for a long time, individual investments will be funded to a lesser extent, taking into account the growing number of signed contracts. This may result in shifting most of their budget on the originators of the actions for the environmental protection, and the increasing importance of enterprise's own resources in the ecological investment market.

As presented in the analysis of the fund in the 2009-2013, it mainly supported projects involving the wastewater management of the entities operating in the

cities and municipalities Witnica, Szprotawa, Lubsko and in the agglomeration Żagań, in Gorzów Wielkopolski., Zielona Góra and its surroundings. Through these undertakings, the amount of pollutants in the province has decreased. As a result of the business investment in the protection of the atmosphere, the indicators of contamination has improved. At the same time aid granted by the fund during the analyzed period was a significant financial contribution to the development of the market for environmental investments in the regional enterprise sector, helping to improve their relationship with the environment and the quality of life of the inhabitants of the region.

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