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**Małgorzata Sej-Kolasa**

*University of Economics in  
Wrocław Poland*

*e-mail: [malgorzata.sej-  
kolasa@ue.wroc.pl](mailto:malgorzata.sej-kolasa@ue.wroc.pl)*

## THE ROLE OF EU FUNDS IN FINANCING ENVIRONMENT PROTECTION

**ABSTRACT.** Measures aimed at improving the quality of the environment and the society's standard of living require quite substantial investments. The prerequisite of meeting the requirements imposed both by the EU directives and by the government's strategy for the environment is a coherent system of environmental investment financing. The financial resources to implement environmental projects may come from public, private or foreign sources. In the recent years, environmental projects in Poland have increasingly been financed from European funds, – namely the Cohesion Fund and the structural funds, among which the most significant are the European Regional Development Fund and the European Social Fund.

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### 1. Introduction

A system for financing environmental protection is an integral part of the state financial system. It is a setup of institutions, economic instruments, principles and regulations governing the ways and means of collecting and distributing the financial resources to fund environmental projects. The Polish system for financing environmental protection was established prior to Poland's EU accession and is based on different sources of law and a different philosophy. The EU environmental regulations facilitate a technology-based approach, which holds the user of the environment responsible for keeping strict compliance with product and emission standards. In the Polish legal system, pro-environmental activities have been focused on the environmental impacts [7, 119].

The financial resources to implement environmental projects may come from public, private or foreign sources. In Poland, environmental projects are financed from [7, 119-120]:

- own resources of various entities – companies and/or local authorities,
- environmental funds – the National Fund for Environment and Water Management and its provincial, district and community counterparts,
- commercial banks, especially Bank Ochrony Środowiska [Bank for Environment Protection]
- foreign sources,
- other sources, e.g. pro-environment foundations.

The extent of expenditure on the environment in Poland from 2000-2006 is shown in Table 1.

Table 1. Environmental expenditure in Poland, 2000-2006

Year	2000	2001	2002	2003	2004	2005	2006
Total (in billions PLN)	37.4	36.7	30.0	30.6	31.0	30.6	36.1
Percentage of GDP	4.5	4.4	3.6	3.5	3.4	3.1	3.4
Per capita (PLN)	977.7	958.5	784.8	801.9	813.1	801.9	947.8

Source: author's work, based on [5, 429].

A structural analysis of environmental expenditure in Poland between 1997-2006 shows:

- high levels of engagement in terms of investors' own resources, at 49% on average;
- a significant involvement of environmental funds (ca. 21%),
- the gradually decreasing contribution of the national budget towards project financing, from 7.6% in 1997 to 2.8% in 2006;
- the growing participation of foreign sources.

The extent of investments in fixed assets for environmental protection (by source) is shown in Table 2.

Table 2. Investments in fixed assets for environmental protection (%)

Source of funds	1997	1998	1999	2000	2001	2004	2005	2006
Own resources	47.00	50.20	46.20	53.40	51.80	48.10	49.07	45.52
National budget	7.60	6.40	5.20	5.40	4.10	2.76	2.65	2.76
Foreign resources	3.80	7.30	5.90	3.90	3.20	12.23	15.96	19.16
Environmental funds	16.90	16.20	24.60	20.00	23.70	24.14	21.15	17.56
Domestic credits/loans	16.50	12.50	12.90	11.70	12.10	8.27	7.60	11.43
Other	8.20	7.40	5.20	5.60	5.10	4.50	3.56	3.59

Source: author's work, based on [5, 431].

A structural analysis of environmental expenditure in Poland is shown in Figure 1.

The contribution of foreign resources to environmental protection in the 1997-2002 period was quite low and on average amounted to just above 5%. Since 2002, the figure has been climbing steadily, reaching 8.8% in 2003, 12.2 in 2004, 16% in 2005 and 19.2 in 2006 [5, 431].

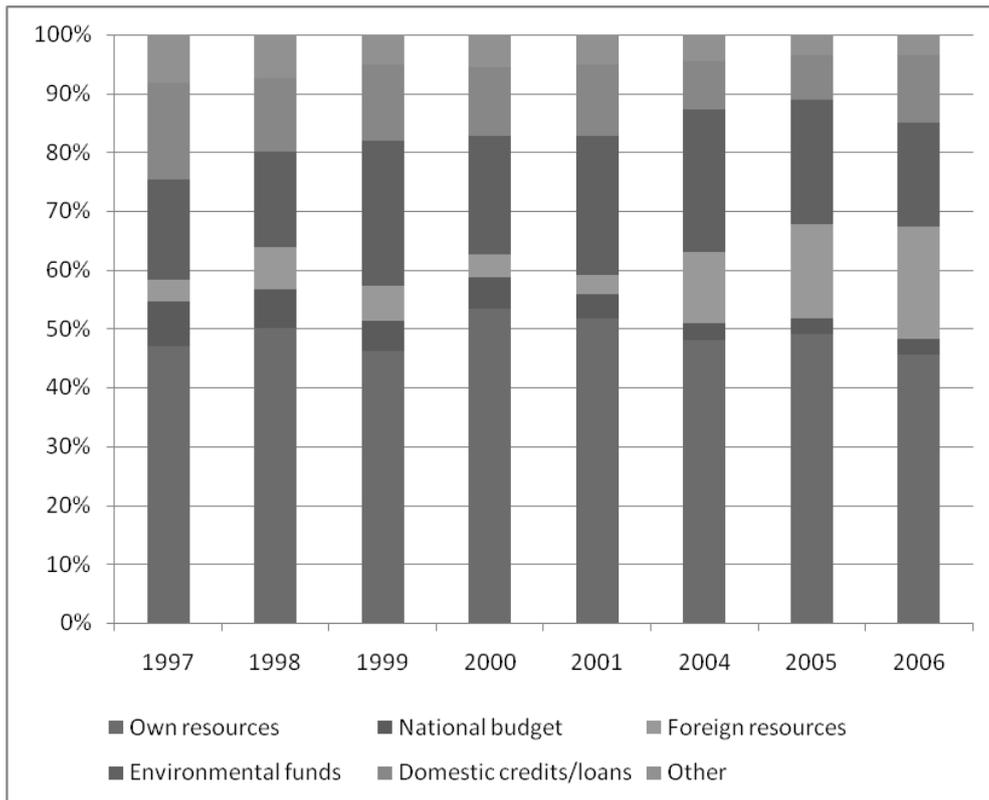


Fig. 1. Structure of environmental expenditure in Poland between 1997-2006  
 Source: author's work, based on [5, 431].

For instance, in 2006, in terms of foreign sources, the largest investments in fixed assets for environmental protection were made in the water and sewage industry (78%); 11% went to solid waste management, and another 10% to air protection [5, 437]. The distribution of foreign resources among various industries is shown in Figure 2.

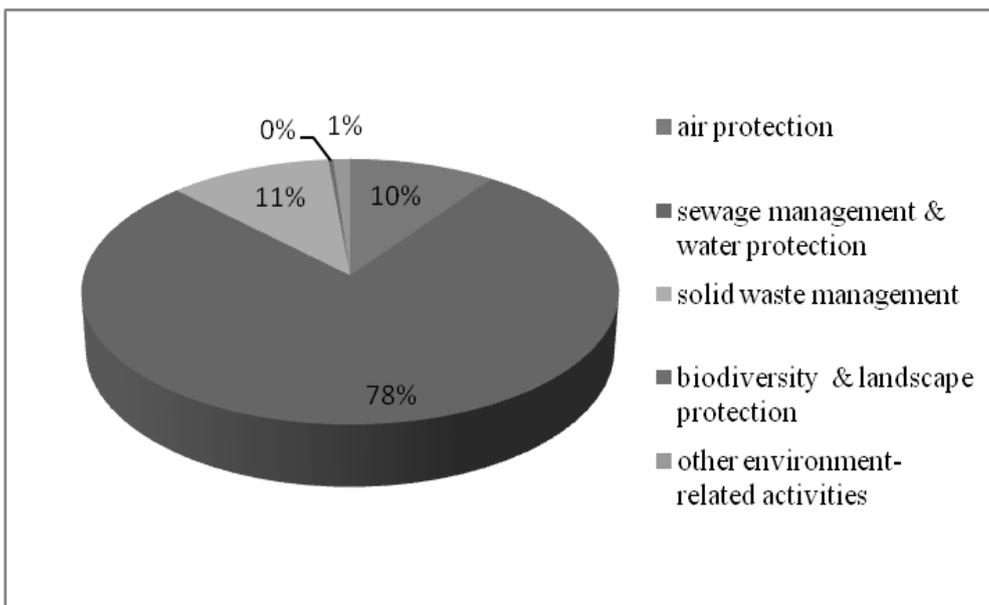


Fig. 2. 2006 foreign investments by industry  
 Source: author's work, based on [5, 437].

Upon European accession in 2004, Poland gained access to EU funds, a large proportion of which are directed into environmental projects. The basic EU funds which provide resources for environmental protection include [7, 128; 9, 16]:

- the Cohesion Fund,
- Structural funds:
  - European Regional Development Fund (ERDF),
  - European Social Fund (ESF),
  - European Agriculture Guidance and Guarantee Funds (EAGGF),
  - Financial Instrument for Fisheries Guidance (FIFG).

## 2. Cohesion Fund

The Cohesion Fund was established to aid the reduction of economic and social disparities within the European Union countries and region. Cohesion Fund support is addressed to those member states whose Gross National Income (GNI) per capita is below 90% of the Community average. Cohesion Fund resources are intended for the co-financing of large investments related to the development and/or modernization of the transport infrastructure (roads, rail, ports, water supply networks etc.) and to environment protection (including wastewater treatment plants). The resources are evenly distributed between road infrastructure and environmental protection. Within the area of environment protection, the top priorities are [3]:

- enhancement of surface waters quality,
- improvement of drinkable water quality and distribution,
- enhancement of air quality,
- streamlining of solid waste management,
- soil protection,
- flood protection.

Under these priorities, the Cohesion Fund may also co-finance projects related to energy or transport, inasmuch as they bring significant environmental benefits by ensuring energy efficiency, the use of renewable energy resources, the development of rail transport, the enhancement of inter-modality (i.e. the transport of goods by combined transport means) or the development of public transport. This is related to the European promotion of sustainable development policies, focusing on economic development which does not compromise the environment.

During the period between 2004-2006, Poland was awarded €7,590.5 million. At present, some of the projects co-financed by the Cohesion Fund are still underway; the allocation of resources between the environment and transport-oriented projects is shown in Table 3.

Table 3. Number of projects, qualified expenditures and extent of the Cohesion Fund's involvement in Poland in 2004-2006

Sector	No. of projects	Total qualified expenditure (€)	Total ECF's involvement (€)
Transport	38	3 574 691 400	2 782 541 500
Environment	90	4 287 214 756	2 850 516 602
<b>Total</b>	<b>128</b>	<b>7 861 906 156</b>	<b>5 633 058 102</b>

Source: [4]

Allocations to environmental projects are shown in Figure 3.

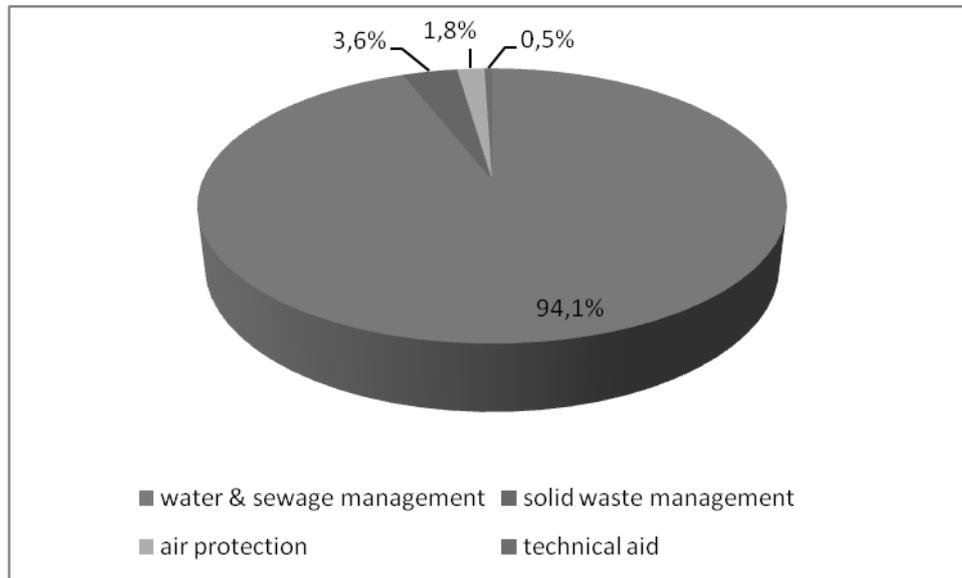


Fig. 3. Allocations to environmental projects

Source: author's work, based on [4]

In April 2008, €3.41 billion of the total sum awarded to Poland by the Cohesion Fund still remained unused.

Under the next Cohesion Policy (2007-2013), the Fund will support multiyear investment programmes managed at grass roots level, rather than individual projects requiring the Commission's approval. In Poland, the eligible programme is the 'Infrastructure and Environment' operational programme.

### 3. Structural funds

The objective of the structural funds is to aid the processes of restructuring and modernising European economies, leading to the reduction of discrepancies between regional development levels. Besides the environment, the main areas of investments supported are public infrastructure, corporate investments, employment and training projects.

The instruments most important to the implementation of regional policies are two funds: the European Regional Development Fund and the European Social Fund.

#### 3.1. European Regional Development Fund (ERDF)

The ERDF's objective is the promotion of investment and working towards the alleviation of disparities between the European regions. The Fund's priorities include research, innovation, environmental problems and risk prevention, while infrastructural investments still remain a significant area of support, especially in the least developed regions.

Under the three different objectives of the EU's regional policy, that is convergence, regional competitiveness and employment, and European territorial cooperation, the ERFD aids different EU regions in different areas. In Poland, the first and third objectives are implemented [1].

In the regions supported under the Convergence objective, the ERFD focuses on modernisation and disparities in the local economies, as well as on the creation and maintenance of stable jobs. The Fund offers co-financing in twelve areas, among which environment protection is a significant one. Within this area, the investments supported are related to the water supply, water and waste management, sewage treatment and air quality. The aid is aimed at alleviating the impact of climate change, restoring the natural environment, revitalising post-industrial areas, promoting biodiversity and environment protection, and implementing environment management systems.

The financing offered to environmental projects under the European Territorial Cooperation objective focuses on the following activities [1]:

- the enhancement of the protection of natural resources,
- establishing easier access to trans-border water and power supply systems and facilities, as well as waste management facilities,
- the establishment and development of trans-border cooperation, including bilateral cooperation in the area of the environment and sustainable urban development.

### **3.2. European Social Fund (ESF)**

The core objective of the European Social Fund (ESF) is the levelling of differences in the income levels and quality of life between EU member countries and regions through facilitating the development of the poorer European regions. In other words, the EFS objective is to facilitate the social and economic cohesion of the unified Europe [2].

In comparison with the European Regional Development Fund, the projects co-financed by the EFS have a more ‘social’ dimension. They deal with issues directly affecting the citizen, e.g. upgrading professional qualifications, unemployment prevention and the vocational development of the unemployed. As far as the environment is concerned, EFS financing can be used to promote the creation of ‘green’ jobs and provide education, training and enhancement of environmental awareness.

### **4. “Infrastructure and Environment” operational programme**

The “Infrastructure and Environment” Operational Programme (I&E OP / POIiŚ) is the largest operational programme in the whole EU in terms of the available funds and the scope of activities, as well as the most significant source of financing for the investment projects related to the environment protection in Poland.

The programme’s objective is to enhance the attractiveness of Poland and its regions to potential investors through the development of the technical infrastructure, with simultaneous enhancement of environment quality and protection levels, healthcare, cultural identity and territorial cohesion [8].

The 2007-2013 implementation of the ‘Infrastructure and Environment’ Operational Programme was awarded EU financing to the sum of €27.9 billion, out of which nearly €5 billion (about 17.6%) will be spent on environmental protection. The EU financing for the I&E OP will come from two sources; the Cohesion Fund (€22.2 billion) and the European Regional Development Fund (€5.7 billion).

The Programme will involve the implementation of 15 priority axes, five of which are directly related to environmental protection [8]:

1. water and sewage management;
2. solid waste management and soil protection;
3. natural resource management and alleviation of environmental threats;

4. corporate investment to meet environmental requirements;
5. the protection of nature and the development of environmental awareness.

The volumes of EU financing and the percentage shares in the total EU funds awarded to the five priority axes are presented in Table 4 (see also Figure 4).

Table 4. The environmental priorities within the ‘Infrastructure and Environment’ Operational Programme

Priority axis	EU financing	
	€ mln	%
Water and sewage management	2 784	57,4%
Solid waste management and soil protection	1 216	25,1%
Natural resource management and alleviation of environmental threats	557	11,5%
Assistance to corporate investments	200	4,1%
Nature protection and environmental awareness	90	1,9%
<b>TOTAL</b>	<b>4 847</b>	<b>100%</b>

Source: author’s work, based on [8]

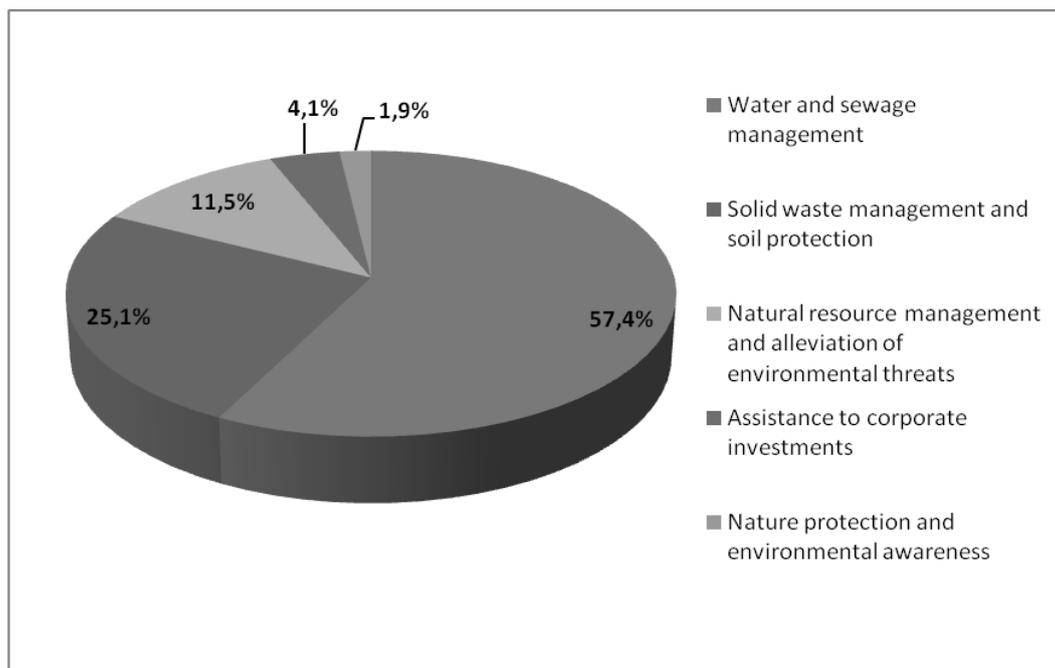


Fig. 4. The environmental priorities within the ‘Infrastructure and Environment’ Operational Programme

Source: author’s work, based on [8]

## Conclusions

On one hand, the experiences gained during the initial period of utilising the financing offered under the individual EU initiatives proved how huge the interest in winning EU financing was; on the other, it revealed the weaknesses of the implementation system. The level of consumption of the EU funds awarded to Poland for the 2007-2013 period is disturbingly low; during the first half of 2008, only 3% of the available financing was utilised. The most advanced are the Technical Aid and the Human Capital programmes, while the least successful has been the implementation of the Infrastructure and Environment programme.

The implementation of the operational programmes and the consumption of funds could be enhanced by favourable legislation allowing an efficient distribution of resources and fast project implementation. The Polish legal system should be further harmonised with that of the EU and the funding application procedures simplified.

In the coming years, foreign sources of financing are likely to remain an important element of environmental project financing in Poland. The predicted structure of environmental expenditure in Poland during 2008-2014 is presented in Table 5.

Table 5. Environmental expenditure in Poland, 2008-2014

Source of funds	2008	2009	2010	2011	2012	2013	2014
Own resources	53,2	53,5	53,6	51,6	51,5	51,6	51,5
National budget	5,6	5,3	5,3	7,3	7,3	7,3	7,3
Foreign resources	20,3	20,4	20,3	17,4	17,4	17,4	17,4
Environmental funds	20,9	20,8	20,8	23,7	23,8	23,7	23,8
TOTAL	100	100	100	100	100	100	100

Source: author's work, based on [6]

The guidelines for the national environmental strategy for 2007-2010, including a perspective on 2011-2014, imply an expected change in the structure of sources for environmental project financing. During 2008-2010, contributions from foreign sources will be approximately 20.3% and are expected to decrease to 17.3% between 2011-2014, thus increasing the participation which will be required of the national budget and ecological funds [6].

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