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The earmarked funds as a basic economic instrument of environmental policy in Poland

Earmarked funds – collecting environmental fees and penalties – have played important and specific role in the financing of investment for environmental protection in Poland and in other Central and East European countries. Not so long ago they covered up to 40-50% of all investments in this field, at present this index in Poland is 24-25%. The Polish system of environmental funds is complicated and divided onto four levels (and four other kinds) as well as other weaknesses. But these funds have a lot of strengths owing to which they can play an essential part in the financing of some environmental programmes, especially connected with foreign assistance etc. In the article there are discussed some necessary improvements in the present system and possibilities of important changes in the future: environmental fees and funds should be replaced by taxes.

Introduction

Environmental funds (as special purpose and target funds or *earmarked funds*) have played a specific role in the financing of environmental protection in Central and Eastern Europe. In general they were established in eighties, therefore in former system, but they have lasted out the political and economic transformation. These earmarked funds come as a main source for environmental protection financing. Especially in Poland not so long ago they covered up to 40-50% of all investments in this field. Compared to other countries, the funds are characterized by a fully developed system and great independence owing to application of environmental fees and other own sources of incomings (without budget subsidies, unlike in Slovakia or even in Hungary). Recently, however, their importance has been decreasing due to both the falling charges for using the environment as well as a reduction of public aid and a fuller implementation of the rules of market economy. Particularly recently the criticism of all *target* funds operating in Poland has intensified. There have also been some attempts to close most of them. The Polish *environmental funds*, however, have their own special character working to their advantage. The aim of this article is to estimate the management of environmental funds and to join the debate on the prospects of this source of financing protective undertakings.

Economic outlays for the protection of the environment

In the nineties Poland made great progress in the reduction of the degradation of natural environment as the emission of most pollutants decreased by 40-60%. At first this was the result of a fall of industrial production, caused by the economic crisis, but after 1995 the main factors of this improvement were structural changes in industry as well as intensification of protective undertakings. This new environmental policy was supported by increasing financial means earmarked for the protection of the environment but, unfortunately, only till 1998 (see table I).

The essential progress in the investments in environmental protection is testified by the share of these investments in the national income (GNP). Before 1990 it was even below 0.5%), and in 1996 it reached 1.6%. This value is comparable with that of highly developed countries although the outlays per one inhabitant are still much lower in Poland. Similarly, the participation of the examined outlays in the total investment expenses in the national economy started to grow to reach an apogee of 9.4% in 1996.

Unfortunately, since 1999 we have been observing a distinct slowdown of environmental ("pro-ecological") investments, resulting in the fall of all indicators. Thus, while investment outlays in fixed prices in the years 1995-2000 grew by about 20%, they dropped by almost 30% in 1998-2000. In 2001 the outlays dropped by 6% in comparison to 2000 and in 2002 by a further 18.5%. It means a fall in investment in 1998-2002 by about 50%! This decrease was then greater than that in general indicators of economic development. At last in 2004-2005 a kind of boom in economy has appeared and economic growth is about 4-5% of GNP per year. It also influences advantageously on investment in environmental protection. But in spite of an assistance of the European Union this progress has not been satisfying.

Table I
Investment outlays for environmental protection in Poland in 1990-2004

Specification	1990	1995	1998	1999	2000	2002	2003	2004
Outlays in thousands of millions PLN ^{a)}								
• current prices	0.42	3.17	9.02	8.58	6.57	5.03	5.14	5.34
• prices in 2000	2.17	5.14	10.06	9.03	6.57	4.98	5.07	5.17
Participation in w %								
• in investment outlays in national economy	3.6	6.7	8.0	6.8	4.9	4.6	4.6	4.4
• in gross national product	0.7	1.0	1.6	1.4	0.9	0.6	0.6	0.6

^{a)} 1 PLN was about 0.23 EUR and 0.25 USD (1 USD = 3.85-4.00 and EUR = 4.10-4.60 zloty in 2000-2003). In 2005: 1 PLN was about 0.26 EUR and 0.32 USD (1 USD = 2.90-3.20 and 1 EUR = 3.80-4.00 zloty).

Source: Ochrona Srodowiska. GUS, Warszawa 2001, p. 440 and 2004, p. 387; Rocznik Statystyczny GUS, Warszawa 2005, p. 406 and other GUS materials plus own calculations.

To supplement the report data of investment outlays (table 1) it is worth quoting the estimated running costs of environmental protection which Central Statistical Office (GUS) has been publishing for only several years now. Table 2 shows that exploitation expenses of protective devices and the maintenance of environmental protection service surpass pro-ecological investment outlays by more than 25-60%, whereas household expenses in this area are considerably higher. Thus, joint expenses for environmental protection in Poland exceed 30 thousand million zloty per year (about 10 billion USD or 7.7 billion euro).

The tendencies of change in the **structure of economic outlays for environmental protection** are an important issue. Table 3 shows the generic structure of investment outlays. The year 2000 is characterized by a return of relatively high outlays on the protection of water (in 1990-94 about 50%), because in 1995-1999 the high outlays were spent on air protection. About 30% of the outlays on water protection are used to construct and modernize municipal sewage plants. In comparison to the European Union countries, Poland spends relatively less on waste management, which ought to be changed.

Table 2

Running costs and other expenses for environmental protection in Poland in 1998-2004 in thousands of millions (billions) of zlotys, prices in 2004

Specification	1998	1999	2000	2002	2003	2004
Running costs in the public and economic sector	12.60	11.37	11.33	8.18 ^{a)}	8.39 ^{a)}	8.52 ^{a)}
• participation in GNP in %	1.7	1.5	1.4	1.0	1.0	1.0
• per capita in zloty	326	294	294	214	219	223
Household expenses for services and equipment as well as products for environmental protection	..	17.31	17.57	15.68	15.99	16.23

^{a)} Net costs; including receipts from environmental services.

Source: Ochrona Srodowiska. GUS, Warszawa 2005, p. 405 and 441.

Table 3

The generic structure of investment outlays for environmental protection in Poland in 1990-2004 in %

Specification	1990	1995	2000	2002	2004
Water protection and sewage management	48.3	36.6	50.9	56.4	58.6
Air and climate protection	30.6	53.4	36.8	29.5	21.7
Earth surface protection and waste management	20.8	9.5	9.9	11.4	13.8
Landscape, biodiversity and environmental protection	0.2	0.2	0.1	0.1	0.2
Protection against noise	0.1	0.3	0.7	0.5	1.7
Total	100	100	100 ^{a)}	100 ^{b)}	100

^{a)} including unsettled 1.6%. ^{b)} including unsettled 2.1%.

Source: Own calculations based on: Ochrona Srodowiska. GUS, Warszawa 2001, p. 440 and 2002, p.377 and 2005, p. 406.

The expenses of the economic sector (75-76%) for air (31-35%) and water protection (20-22%) dominate in the structure of running costs. It is worth emphasising that 24-26% of running costs are spent on ecological charges (environmental fees) in the economic sector for the emission of dusts and gases, water intake, sewage discharge, storage of waste material, excavation of minerals and exclusion of agricultural land and forest production. About 25% of running costs is spent on the public sector. In the structure of household expenses, the purchase, assembly and construction of facilities and products used directly for environmental production dominates with 76.4% (including 55% for air protection and 12% for biodiversity and landscape protection). The remaining 23.6% is spent on service charges for transport and sewage treatment as well as waste disposal.

The structure of investment outlays with respect to their financing sources is most helpful for the estimation of the application of environmental funds. In table 4 this structure is shown for the period of 1997-2004, because earlier data given by GUS were presented in a different arrangement so they do not compare.

The first and basic group of sources of financing are own means of enterprises. Their participation in the 1990s grew from about 35% to 65% (including credits and loans, because they are repaid from the means of enterprises). In industry the participation of own means is considerably higher (80-90%). The increasing tendency in the participation of own means in the financing of protective investments is right because it results from the essence of market economy, including "the polluter pays" principle. Means from amortisation and profit of enterprises are supported by various kinds of credits and loans (but quite carefully so far, as is shown in table 4).

The second group is composed of *environmental funds* which at first dominated with the percentage of 40-50%, but in the second half of the 1990s this percentage dropped to 20-25%. This tendency is concordant with the rule of limiting social aid, but in Poland, according to the opinions that have been prevailing so far, the

Table 4

The structure of investment outlays for environmental protection in Poland by sources of financing in the years 1997-2004 in %

Specification	1997	1998	2000	2002	2003	2004
Own resources of enterprises and communities	47.0	50.2	53.4	46.7	44.2	48.1
Environmental funds	16.9	16.2	20.0	26.1	25.3	24.1
Central budget means	3.0	2.6	2.2	1.8	1.5	1.0
Local budget means	4.6	3.8	3.2	3.0	1.7	1.8
National credits and loans	16.5	12.5	11.7	12.3	13.9	8.3
Means from abroad	3.8	7.3	3.9	4.2	8.8	12.2
Other means	8.2	7.4	5.6	5.9	4.6	4.5
Total	100	100	100	100	100	100

Source: Ochrona Srodowiska GUS, Warszawa 2001, p. 441 and 2005, p. 407.

role of environmental funds was decisive in the animation of protective investments and, which is already less promoted, it would be a pity to resign from this source of financing environmental protection. The postulates to reduce or even liquidate formally environmental funds that have occurred lately¹, can be criticized in the light of a fall of investment outlays for environmental protection and still high tasks in this area connected, among other things, with the adaptation to European Union standards².

Budget means are the third source of financing. Their share in 1997-2004 dropped from 7.6% to 2.8%, which is an tendency acceptable in a period of system transformation. As far as the means of local budgets are concerned, the share of voivodeship (regional) budgets in 2000 equalled 1.6%, district (county – powiat) budgets 0.2% and gmina (communal) budgets 1.4%. In 2004 these indicators were 0.5%, 0.2% and 1.1% respectively.

The fourth group is composed of *foreign means* whose share has been 4-6% (with a decreasing tendency lately). However, as Poland uses pre-accession funds and European Union cohesion and structural funds, the share of foreign means has reached 12.2% and is expected to grow, according to various prognoses, even to 15-20%.

The structure of outlays for environmental protection **by investors** is also characteristic. And so the share of enterprises as investors in investment expenses was 62-67%, but in 2003-2004 it fell to 47%. The share of gminas was 31-35%, and in 2003-2004 it rose to 50.5%, but it is difficult to estimate whether this will be a permanent tendency. The participation of budget units in these expenses amounts to below 2-3%.

Receipts and expenses of environmental funds

Environmental funds in Poland do not use budget grant-in-aids, which makes them different from most other *target* funds and, generally, also from environmental funds in other Central and Eastern European countries. The main source of these funds are charges (fees and fines) for economic use and for introducing changes in the natural environment, though there appear new tendencies in this area (table 6). The Ecofund, which operates as a foundation is an exception. It was established within the framework of the so-called eco-conversion and is financed from the national budget in amounts equal to the reduction of foreign debts.

Charges for the use of the environment and penalties for nonobservance of environmental regulations feed, in proportions presented in table 5 (obligatory

¹ Finansowanie ochrony srodowiska (editorial debate). "Przegląd Komunalny", 2002, No. 3; Zlikwidowac fundusze? "EkoFinanse", 2002, No. 7-8; Fundusze i Agencje: Dlaczego czesc z nich warto zlikwidowac. "Gazeta Wyborcza", 2002, No. 127.

² K. Gorka: The Functioning and Perspectives of Environmental Funds in Poland. In: Finance and Natural Environment, Edited by L. Dziawgo a. D. Dziawgo, TNOiK, Torun 2003, pp. 563-586.

Table 5

The participation of each fund of environmental protection and water management in the receipts from charges and ecological penalties in %

Sources of receipts	National Fund	Voivodeship funds ^{a)}	Poviat funds ^{b)}	Gmina funds ^{c)}
Charges and penalties for discharge of salty water and emission of nitric oxide ^{d)}	24.5	45.5	10.0	20.0
Charges for waste material storage and penalties for misstorage	14.2	26.0	10.0	50.0
Charges and penalties for tree and shrub removal	–	–	–	100
Other charges and penalties	24.5	45.5	10.0	20.0

^{a)} Regional funds. ^{b)} County funds. ^{c)} Community funds. ^{d)} 100% for National Fund before 2003

Source: Ochrona Srodowiska. GUS, Warszawa 2004, p. 385.

from 1999), first of all *environmental protection and water management funds*. It can be easily inferred from the table that the financial means from charges and penalties are crumbled and that poviat funds are equipped most poorly. All these four kinds of funds are typical environmental funds both in respect of the way of their establishing as well as destination, though there appear essential differences in the rules of their functioning.

Charges for taking over farming grounds for non agricultural purposes supply the *Farming Land Protection Fund*. The Fund is relatively small and is used mostly for economic purposes. The charges for taking over forest land for other purposes go to the Forest Fund, which has at its disposal means several times greater than FLPE. However, the Central Statistical Office has not been publishing any data on this subject for a long time, although not only the manner of establishing this Fund but also prior directions of utilization speak for its inclusion in environmental funds.

Table 6 shows clearly the stabilization of the amount of receipts of environmental funds as well as a falling tendency in receipts from charges and penalties. In 1997-2000 the receipts from charges and penalties in fixed prices fell by almost 29%. In 2001 the receipts dropped by 10%, and for 1997-2001 the fall amounted to 33%. In 2002-2005 it become rather stabilized. This is of course related to the amount of investment outlays earmarked for environmental protection in Poland.

The fall of receipts from charges and penalties is due to two interrelated factors, in addition to the progress in the decrease of pollutant emission. These factors comprise the new rules for ecological charges and a worsening financial situation of firms, which does not encourage them to settle this type of obligations in time. And so in accordance with the new Law of Environmental Protection and decentralization of management, the subjects which profit from natural environment not only record pollution by themselves, but also, on their own, set the

Table 6
Receipts of environmental funds in Poland in 1995-2004

Specification	1995	1998	1999	2000	2001	2004 ^{a)}
Receipts of the Funds of Environmental Protection and Water Management in thousands of millions of zloty in current prices including:	2.02	3.46	3.17	3.78	3.98	2.47 ^{b)}
• charges and penalties in %	63.4	50.0	46.1	38.1	33.0	75.1
• repayment of loans and their interests in %	18.3	32.5	38.7	41.4	45.7	9.9
• receipts from financial operations in %	6.4	4.9	5.0	3.3	5.7	13.7
• other receipts in %	11.9	12.6	10.2	17.2	15.6	1.3
Receipts in thousands of millions of zloty in prices of 2000:						
• funds of environmental protection and water management	3.28	3.86	3.33	3.78	3.80	2.20
• Farmland Protection Fund	0.05	0.09	0.07	0.07	0.07	0.10
• Ecofund	0.10	0.12	0.13	0.14	0.14	0.15
Total	3.43	4.07	3.53	3.99	4.04	2.45

^{a)} Data not comparable. ^{b)} The state of funds at the beginning and end of the year: 9.03-9.33 billion PLN.

Source: Own calculations based on: Ochrona Srodowiska. GUS, Warszawa 2001, p. 406, 491 and 494; 2005, p. 461, 464 and 474.

amount of due charges according to the rates updated annually by the rulings of the Council of Ministers. Poor awareness of this duty among small businessmen in connection with economic stagnation and weak control caused such behaviour of the payers. The action undertaken by the Department of Environment has probably solved this problem, but the issue of decreasing receipts from charges and penalties remains unsolved.

The changes of the structure of environmental fund receipts are an essential matter. The least mobile is the structure of charges and penalties. In the case of environmental protection and water management funds more than 50% of the receipts from charges and penalties come from air pollution, about 35% from water intake and sewage discharge, about 10% from waste storage. The enforcement of charges equals 90%. The receipts in question come mostly from charges, because penalties comprise only 2-2.5% of all receipts.

The structure of receipts presented in table 6 clearly depicts a falling tendency of the share of charges and penalties in the receipts of environmental protection and water management funds: they amount to only 38% of the receipts, and even less in the case of the National Fund for Environmental Protection and Water Management

(NFEPWM): only 35%. This is a result of conferment of the status of legal capacity to the National Fund and to voivodeship funds in connection with their economic activity: granting loans, which is commonly accepted and purchase of securities, companies entering with shares etc., which arouses controversies. Repayment of loans and their interests now amounts to 41% of the fund receipts, and in the case of NFEPWM even more than 58% (in 2000). This provides a basis for the qualification of the National Fund as well as voivodeship funds into revolving funds. Powiat and gmina funds use only ecological charges (and donations) and do not conduct other activity in addition to giving grant-in-aids. It is worth adding that the participation of charges for the removal of trees and shrubs in the receipts of gmina funds increased during the examined period from about 10% to 23-27%.

Table 7 shows the internal structure of environmental funds and water management funds. The observable structural changes prove the decentralization of fund means, mostly because of the establishment of powiat funds and administrative increase of the participation of gmina funds in the receipts from environmental charges and penalties.

The receipts of the Farmland Protection Fund amounts to 1.5-2% while the receipts of the Eco-Fund 3-3, 5% of Poland's receipts of ecological funds. The receipts of the Eco-fund equal 28-42 million USD of annually reduced foreign debts, with a growing tendency for a few more years (in principle to 2010).

The expenses of environmental funds also show a growing differentiation. The first tendency consists in the increase of participation of loans given at the cost of grant-in-aids and other forms of unreturnable aid. However, in the case of all environmental protection and water management funds the relation between returnable and unreturnable aid has remained on a similar level of 57:43 or 55:45 for the past few years, which is a result of increased grant-in-aids given by powiat funds and especially gmina funds (tables 8 and 10). In the case of the National Fund and voivodeship funds this tendency is very distinct already (table 9).

Table 7

The structure of receipts of environmental protection and water management funds in 1997-2004

Specification	Total receipts						
	1997	2000	2003			2004	
	%	millions PLN	%	millions PLN	%	millions PLN	%
National Fund	46.2	1539	40.7	794	31.1	786	31.8
Voivodeship funds	40.7	1517	40.1	975	38.1	962	38.9
Powiat funds	–	159	4.2	160	6.3	170	6.8
Gmina funds	13.1	568	15.0	627	24.5	556	22.5
Total	100	3783	100	2556	100	2474	100

Source: Own calculations based on: Ochrona Srodowiska. GUS, Warszawa 2001 and 2002 and 2005, p. 464.

Table 8

The participation returnable and unreturnable aid given by funds of environmental protection and water management in the years 1998-2004 in %

Specification	1998	1999	2000	2001	2003	2004
Loans and credits	57.4	64.7	57.5	55.4	50.4	50.8
Grant-in-aids, surcharges and amortisation	42.6	35.3	42.5	44.6	49.6	49.2
Total	100	100	100	100	100	100

Source: Own calculations based on NFEPWM. "EkoFinanse", 2002, No. 7-8, p. 7, Ochrona Srodowiska, GUS, 2005, p. 469.

Table 9

The generic structure of NFEPWM expenses in the years 1997-2004 in %

Specification	1997	2000	2001	2002	2004
Loans and credits	59.4	67.7	57.6	52.7	47.8
Grants-in-aid, surcharges and redemptions	28.6 ^{a)}	25.6	32.1	39.1	48.4
Bond and share purchase in companies	4.9	0.3	3.7	0.4	3.8
Expenses from foreign funds	4.2	3.4	4.4	5.3	–
Running costs of operation	1.7	2.6 ^{b)}	1.8	2.2	–
Other expenses	1.2	0.4	0.4	0.3	–
Total	100	100	100	100	100

Source: Own calculations based on the ground: Ochrona Srodowiska. GUS, Warszawa 1999, p. 410 and 2001, p. 449 and 2005, p. 469 and others.

The National Fund designs 60-70% of rendered aid to loans and credits, and the rest to grant-in-aids, surcharges and amortization as well as to capital shares (which is most challenged from the point of view of economic rules). The policy of voivodeship funds is similar, for example 72.3% of financial assistance was spend on loans in 2000: among others in the Malopolskie Voivodeship (Cracow) 84.7%, in the Silesian Voivodeship (Katowice) 73.1% and 27.3% on grant-in-aids.

About 90% of NFEPWM aid is used for investments, the remaining 10% for the stale ecological monitoring, fight with extraordinary environmental hazards, environmental education, research and impact assessment, etc. (excluding 2% of the total expenses for the Fund maintenance). The generic structure of investment expenses of NFEPWM is similar to the structure presented in table 3. The assistance of voivodeship funds is characterized by a similar structure: protection of water and water management over 50%, protection of air 28-33%, protection of the surface of earth and waste management 8-9%, and fight with extraordinary hazards and environmental education almost 2% (as in the case of NFEPWM). Powiat funds allocate over 60% of their expenses to the storage and neutralization of waste material. Gmina funds, in turn, finance water protection, flood control and

water management to about 40% of the expenses, air protection 15-20%, waste material management 9-10%, preservation of nature and landscape 9-12%, environmental education nearly 3% of the total expenses.

Table 10 shows the internal structure of expenses of environment protection and water management funds. Its content correlates with the structure of receipts (table 7). This confirms a decentralization of the financial means of NFEPWM.

The Farmland Protection Fund has spent 70-108 million zloty per year lately, which constitutes only 2-3% of the total expenditures of environmental funds; 77-80% of the expenses of FPF are earmarked for the construction and modernization of roads for the purpose of agriculture, the rest falls to the fertilization of soil, reclamation of waste land and construction and renovation of water reservoirs.

The Ecofund used to spend 100-150 million zloty annually, which equals 3-4% of the expenses examined. The structure of the expenses is as follows: air and climate protection 42-60%, the Baltic and sewage management 29-35 %, biodiversity protection 14-21%. This structure results, to a large degree, from the preference of the creditors who agreed on a conversion of the Polish debt.

In table 11 the data on the receipts and expenses of environmental funds, with special regard given to NFEPWM, were presented synthetically. These data confirm once again the falling tendency in managing environmental funds. The relatively low participation of the expenses of the funds in the means at their disposal (71-83%) draws attention. It could be explained by delays during the year in transfers of charges and by organizational indispositions of funds or by high interest on loans, as well as by insufficient preparation of potential investors. In addition, the participation of the expenses earmarked for environmental protection in total expenses have worsened and NFEPWM expenses for non-ecological purposes have already achieved 9% of these expenses. The facts mentioned are a premise of critical estimations of the functioning of environmental funds (with the exception of the Eco-fund).

Strengths and weaknesses of environmental funds

It is first of all the affluence of environmental funds in Poland that is their strength thanks to which they can play an essential part in the financing of envi-

Table 10

The structure of expenses of environmental protection and water management funds in 1996-2004 in %

Specification	1996	1998	2000	2001	2003	2004	Changes 1996-2003
National Fund	49.4	38.1	41.8	48.9	37.8	29.0	-20.4
Voivodeship funds	38.2	48.8	39.0	35.6	45.4	52.1	+13.9
Powiat funds	—	—	3.0	2.9	4.1	4.2	+4.2
Gmina funds	12.4	13.1	16.2	12.6	12.7	14.7	+2.3
Total	100	100	100	100	100	100	—

Source: Own calculations, as in tables 7 and 9.

ronmental protection. Simultaneously, they are an important factor for stimulating enterprises to undertake protective actions and to reduce the emission of pollutants. This is so because ecological charges, which are their main source, especially on poviats and gmina levels, perform not only funding but also stimulating functions to an ever greater extent (which is criticised by opponents).

In the first instance environmental funds began to support gmina investments, mainly the construction of sewage treatment plants and waste management, and lately such undertakings as removal and neutralization of toxic waste material from graveyards and asbestos, the construction of combustion plants for medical waste material and dangerous waste disposal sites, reclamation of land after sulphur mines (in this instance NFEPWM is the only institution financing this project). One needs to add preservation of nature and landscape as well as biodiversity (where Ecofund is the greatest payer) on which the budget, not to mention private enterprises, only reluctantly spend their money. Thus, in this area the role of the funds cannot be overestimated but it gets acceptance from the point of view of the rules of public aid, whose services in this case do not infringe on the rules of competition. It has been postulated lately to expand the idea of equal treatment of all economic subjects and consequently to reduce economic preferences also in municipal activities, yet the aims of environmental funds in this field can be acknowledged as natural.

The importance of environmental funds as an independent source of financing investments and other undertakings (including research and education) is particularly great during a period of budget difficulties, when the support of environmental protection by the state has no due place in the hierarchy of economic and social needs. Another reason is an unfavourable financial standing of companies, especially in heavy industry, the most arduous environmentally, and little ecological awareness of businessmen, mostly in small industries.

An important advantage of the funds is, what in many countries is usually undertaken by state agencies and chambers of commerce or by other entrepreneur organizations, promotion of technological progress in environmental protection, especially the so-called integrated technologies (instead of "end-of-pipe" investments), as well as energy-saving investments. In this way the development of industry producing equipment for environmental protection and energy production from renewable resources is supported. These investments, in turn, generate new workplaces. But turns, National Fund serves an important function in the implementation of foreign aid, also from the resources of the European Union. Thus, in 1990-2002 Poland received 131.9 million EUR from the PHARE fund for environmental protection and to this end the National Fund signed 640 different contracts. Then within the framework of the ISPA programme the Fund has already signed memoranda initially for the amount of 572 million EUR to be spent on water and sewage management (90%) and on waste utilisation. From 2004 the Fund serves grant-in-aids from the Cohesion Fund and from structural funds probably in the amount of 700 million EUR annually. These resources are earmarked for the financing of infrastructure and pro-ecological investments of public character and this is why a commercial bank should not be the implementation unit.

Table 11
Management of environmental funds in 1995-2004

Specification	1995	1998	1999	2000	2001	2004
Environment protection and water management funds in thousand million zloty in current prices:						
Total receipts	2.02	3.46	3.17	3.78	3.98	2.47
Means at disposal	2.51	4.05	4.32	4.62	5.27	9.03
Total expenses	1.81	2.90	3.49	3.27	4.15	3.79
including financial aid earmarked for environmental protection	1.73	2.67	3.17	2.99	3.76	–
The participation of expenses in the means at disposal in %	72.1	71.6	80,8	70.8	78.7	–
The participation of financial aid in total environmental protection expenses	95.6	92.1	90.8	91.4	90,6	–
Expenses in thousand million zloty in the prices of 2000:						
The expenses of FEPWM	2.93	3.23	3.67	3.27	3.79	3.20
including those earmarked for environmental protection	2.81	2.98	3.34	2.99	3.57	–
The expenses of FPF	0.05	0.10	0.07	0.08	0.07	0.09
The expenses of the Eco-fund.	0.08	0.10	0.11	0.13	0.14	0.12
Total expenses of environmental funds	3.06	3.43	3.85	3.48	4.00	3.41

Source: Own calculations based on: Environmental protection. GUS, Warszawa 2001 and 2005 and table 6.

A well-organized and coherent system of environmental funds in Poland is their strength. Of course, one can enumerate certain shortcomings, which have already been and will be mentioned, but they do not discredit the whole system. So in the conditions of the transformation of the economy, the system of environmental funds proved to be a good and practical solution, adapted to the specificity of the Polish economy, which has already been appreciated in the West since the conference of ministers of environmental protection in Lucerne in 1993.

The numbers in table 12 prove the strength of the funds of environmental protection and water management. It appears that the financial assistance of the funds reached 3-3.6 thousand million zloty annually in the last years and was twice as high as the receipts from charges and penalties. This situation, profitable for the beneficiaries of the financial assistance on the "market" of grant-in-aids and of preferential loans, is the result of a widely understood capital activity of the National Fund and of voivodeship funds.

Loans and credits with nearly 59% share dominate in financial assistance (with 73% in the National Fund and voivodeship funds; powiat and gmina funds do

Table 12

Feeding the National Funds of Environmental Protection and Water Management from charges and penalties versus the aid provided by these funds for environmental protection in the years 1998-2001

Specification	1998	1999	2000	2001	2004
Feeding by Marshall's offices from charges and penalties in millions of zloty	1662	1446	1571	1433	1275
Aid for investors provided by NFEPWM in millions of zloty	2714	3228	3060	3585	3074
The aid-to-supply ratio in %	163.3	223.2	194.8	250.2	241.1

Source: Materials on NFEPWM. "EkoFinanse", 2002, No. 7-8, p. 7; Ochrona srodowiska. GUS, Warszawa 2005, p. 464.

not grant loans and credits). In unreturnable assistance, grant-in-aids have so far amounted to 85.2%, extinction of loans due to a correct realization of investment tasks –11.8% and surcharges to preferential credits –3%.

The role of the funds in question on the loan and credit market is manifested by the fact that they spend 1.6-2 thousand million zloty on this aid, including 0.8-1.2 thousand million zloty annually from NFEPWM. The National Fund estimates its "financial power" even at 1.6 thousand million zloty annually. This amount is nearly 10 times greater than preferential credits for protective investments given by the Bank Ochrony Srodowiska SA (Bank of Environment Protection). These credits since 1998 did not exceed 280 million zloty annually³.

Evaluating the functioning of environmental funds so far, one can also point to their many **weaknesses**. The first group of critical estimations results from the theoretical premises of modern economics which claims that the complicated rules of free competition must be observed in market economy and therefore public aid should be limited to special cases and target funds clearly specified as to their purpose and time horizon. Charges, in turn, should be replaced by taxes paid to the budget which is driven by more objective criteria in granting services than merit-based target funds. In their environmental policies the majority of countries try to follow these premises, but practical considerations cause that even in fully developed countries the implementation of new rules is gradual and rather slow. Meanwhile, state agencies and earmarked funds in Poland have grown so much that more than 20% of public means, which they have at their disposal, remains beyond the control of the state budget as well as municipal budgets.

A theoretical objection that the resources are merit-based finds its confirmation in practice in the unsatisfactory efficiency of the management of environmental fund means. The National Fund and voivodeship funds have already

³ Zlikwidowac fundusze? "EkoFinanse", 2002, Nos 7-8, p. 6; Ochrona Srodowiska, GUS, 2004, p. 437.

worked out lists of priority programmes as well as criteria and procedures for granting financial means, which makes it possible to check the purpose of the undertakings and to execute a suitable course of conducting projects. They are being continually improved and open to the public (available on the Internet) and supervised by external auditors and NIK (the Supreme Chamber of Control) and additionally by the European Commission and OECD. However, these procedures in principle skip economic efficiency evaluation, although formally, this question must be answered. This evaluation is, in general, difficult with regard to the incommensurableness of the effects of non-productive investments. Then, one of the measurements is the so-called cost-efficiency, i.e. the amount of investment outlays as calculated per effect unit in a natural measurement but, for a full evaluation, standard or model indicators or another system of reference are indispensable, which is usually not easy. First estimations indicate that the funds finance, for example, similar sewage treatment plants but with very diverse investment outlays per 1 m³ of sewage treated, and so not all grant-in-aids and loans are effective, though they are given for target projects to be properly carried out as far as their organizational-technological aspects are concerned. There is much evidence that budget means are not used effectively, particularly those from self-government budgets.

Sometimes another objection is raised, namely that environmental funds as *para budgets* cause the so-called effect of driving services and commercial resources out of the market of environmental protection, but Professor Bogusław Fiedor and Professor Tomasz Zylicz do not agree with such an opinion claiming that, on the contrary, the funds counterreact. And so, by means of financial assistance in the form of grant-in-aids and preferential loans they encourage self-government subjects to undertake investment projects and to supplement their limited means with commercial credits⁴.

The fragmentation and commutation of the resources of environmental funds is a major weakness, since some gmina and powiat funds have little receipts at their disposal, below 50 thousand zloty annually. Not only is it impossible to subsidise larger projects, but their insufficient resources makes them earmark them for other, communal goals, often against the rules of rationality. A three-level organization of environmental funds would certainly be better. In 1998 an opportunity appeared to strengthen the existing three-stage structure by the replacement of gmina funds with powiat funds (or vice versa) in connection with the new administrative division of the country being prepared then (and not the creation of a separate powiat fund). The author of this text was then an advocate of changes but simultaneously an opponent of the establishment of another fund on the basis of the existing system of charges for the use of the environment (in an expert evidence for the Ministry of Environmental Protection). A similar opinion was shared by, among others, the professors mentioned already. The closing of the gmina

⁴ The financing of environmental protection – editorial debate. "Przegląd Komunalny", 2002, No. 3, p. 76.

funds, mostly not affluent, would strengthen poviats funds, which could become useful institutions with regard to the concentration of financial means and also their connection with local self-governments and local finances. Such a solution, however, was incompatible with idea to maintain or increase the powers of gminas within the framework of changes in the state and self-government administration, which was a right idea. Thus, the variants of maintaining the three-stage structure, but with strengthened gmina funds, or with poviats funds only, which were much more affluent than they are now, did not obtain political acceptance in spite of a support by experts. Life proves that experts, not the politicians, were right ... and not the first time.

In addition to the irrational management of the fund means resulting from the use of merit-based criteria, fragmentation of funds and the tendency to seek new sources of receipts (e.g. by purchase of securities) there appear indications of wastefulness which, in a better system of management and proper staff selection as well as observance of the rules of democracy would not take place.

In spite of criticism, the earmarked funds system fulfils its basic purposes. The shortcomings found can be removed if there is a political will and a more efficient system of management of the national economy. So far both the actual and the planned changes in the system of FEPWM can be qualified as gradual, though the future ones were intended to be far-reaching. Now the government seems to be going to drastic changes, aimed at the closure of the funds shortly, but there is still no conception prepared of new sources of financing the programmes of environmental protection which require public resources.

The future of environmental funds

Polish experience, and especially western models already in nineties indicated the necessity of changes in the system of charges and environmental funds. Directions of these changes were quite clearly defined: supplementing and then substituting the charges for the use of the environment by product and deposit charges, and eventually by environmental taxes. As regards the funds, proposals were less explicit and more controversial with regard to the fact that environmental protection and water management funds acquired the features of revolving funds. For this reason, proposals to privatise and transform them into para-banking institutions or foundations were put forward.

Environmental funds are often evaluated against the total of target foundations and state agencies operating in Poland. In 1990-1991, as part of the so-called shock therapy, some of them were closed. However, their number rose up quickly again, especially as regards state agencies. The recent public finance crisis caused a return of criticism and postulates to close down agencies and earmarked funds. This time the odium of criticism did not fail to reach the environmental funds. The only exception is the Ecofund, which enjoys good reputation. It is worth adding that thanks to statutory changes the Ecofund can already give not only grant-in-aids but also preferential loans, which will increase the means

at the disposal of the Foundation⁵.

Following the pronouncements of some politicians and even economic activists, it could have been believed until quite lately that they do not understand the differences in the manners of creating environmental funds and other earmarked funds, which are based on budget-based grant-in-aids. However, in 2002 a great propaganda campaign exploded for the purge of public finances which comprised, among other things, postulates to pay ecological and other charges (e.g. for failing to employ the disabled) to local budgets, and not to the existing earmarked funds. At this opportunity conspicuous facts of mismanagement and lack of a possibility to control some agencies and voivodeship environmental funds by the parliament were revealed. Press articles used sharp expressions like "legal robbing", "holy cows", or "farm cleaning". Also many facts and numerical data were mentioned, for example, that in 2002 only two agricultural and two military agencies (housing and property sale) obtained budget grant-in-aids at the amount of 3.6 billion zloty from the state. Eventually, a proposal was prepared for the debate of the Council of Ministers in June 2002 to liquidate the tasks and means being the competence of voivodeship funds of environmental protection and water management and the Farmland Protection Fund and also several other earmarked funds and transfer them to marshals of voivodeships. Similarly, it is postulates that communal and county funds should be transferred to the local authorities' offices.

The proposal mentioned above (there are also other proposals, e.g. to link territorial funds with the National Fund or to close down them) is not internally consistent and does not assure an achievement of national aims in environmental protection, because, among other things, it provides for neither substitution sources of financing environmental programmes in the public sector, nor the ones connected with Poland's accession of the European Union. Poviats and gmina funds are now, too, at the disposal of self-governments, but their direct delivery to starosts' and voivods' offices and the voivodeship funds to marshals denotes that earmarked funds will cease to be target means. Members of self-government councils and MPs may have other preferences extorted by temporary needs and by other factors. The Polish law of public finances does not provide for pre-assumed purpose-oriented budget expenses. Therefore, members of self-government councils or MPs have carte blanche in this matter. The proposal in question would then require many legal changes. A possible provision of environmental protection in the budgetary law will change only little, because practice will mean a dispersion of means for different purposes and a temporary *patching of the budget*.

A simplification of the structures by liquidation of the funds is only apparent. One can transfer the grant-in-aid institution to the budget, but this will lengthen exceedingly the qualification and realization procedures (in comparison to the procedures of specialized and experienced earmarked funds). Also transfer of re-

⁵ S. Trzaskowski: Jubileusz Ekofundusz. Na polmetku. "Nowe Zycie Gospodarcze", 2002, No. 11, pp. 32-33.

sources to preferential loans in commercial banks is not a rational solution, either, because they are not prepared for this. A separation of the unreturnable aid from the returnable one will be difficult because of public aid regulations (grant-in-aids may burden the costs of a project only within certain limits, which in certain cases would now be attained more easily). One can quote some opinions that the reasons for fund liquidation are doubtful, especially as regards the effects of public finance reform, but environmental protection will certainly lose, because an important "financial lever in investment processes"⁶ will disappear. The government draft for changes in environmental funds has been undertaken without a strategic vision, and is only an element of a politicians' concept of activities on a short run, without listening to experts.

After some last debates and adjustments the position of National Fund for Environmental Protection and Water Management has been strong and there stands a good chance to continue *status quo* in the matter of voivodship funds (their position was improved). On the other hand, poviats and gmina funds will be probably united or connected with local budgets. The second solution would make these funds lose their earmarked character to the prejudice of outlays for environmental protection. However we hope the budgets of local self-governments will be spending more money for environmental protection in consequence of faster economic development and growing social consciousness. First of all some specialists call for reduction of counties (poviats) number. This way not only local budgets but also environmental funds would be stronger. The second step could be an unification of communal and county earmarked funds. As for the system of fees collected by funds, we foresee meaningful changes within environmental payments because Ministry of Environment has discontinued to raise rates of fees for *the use of the environment* (for the emission) and it has decided to introduce new *product fees* and *deposit fees*. In a longer range perspective the present system of fees for the use of the environment should be replaced by environmental taxes. This solution would facilitate so called green reform of taxes in order to protect the environment as well as to increase the employment owing to lower income tax.

⁶ T. Zyllicz: *Mozna wiecej stracic niz zyskac* (interview). "EkoFinanse", 2002, Nos 7-8, pp. 16-18.