Environmental Funds in Economies in Transition

An Efficient Environmental Financing Vehicle
or
a Dead End?

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Acronyms and Abbreviations

BOS  Bank of Environmental Protection (BOS)
CEE  Central and Eastern Europe
CEPF  Central Environment Protection Fund (Hungary)
CIS  Commonwealth of Independent States
EAP  Environmental Action Plan
EF  Environmental Fund
EU  European Union
FEF  Federal Environmental Fund (Russia)
IMF  International Monetary Fund
LEIF  Lithuanian Environmental Investment Fund
MERP  Ministry of Environment and Regional Policy (Hungary)
OECD  Organisation for Economic Co-operation and Development
PAC  Pollution Abatement and Control
PPP  Polluter Pays Principle
SCEP  State Committee of Environmental Protection (Russia)
1 Introduction

Background
Environmental funds are institutions designed to channel earmarked revenues for environmental protection purposes. These funds, which have been known since the 1970s, vary in scope and nature. In economies in transition, such funds have mushroomed since 1991. Environmental funds exist at national, regional, and local levels and may draw their revenue from a budget line, from extrabudgetary revenues, or from donors. Environmental funds are often (but not always) governed by Boards of Directors representing different sectors of society.

Time to assess EFs
While OECD economies have also had environmental funds (EFs) and other systems of support to environmental investments and policy, this paper will focus on the experience of transition economies. In (some of) these economies, environmental funds have become the source of finance for a sizeable share of total environmental investments (PAC-method). Reflecting this and due to the involvement of foreign donors and financial institutions, there has been considerable international discussion of the merits of the environmental funds system. After 5 to 7 years of existence, it is appropriate to assess the lessons learned with regard to the effectiveness of environmental funds in meeting their objectives.

Structure of paper
Section 2 of the paper discusses the two major problems which the creation of environmental funds seeks to address, namely environmental policy weaknesses and temporary failures of financial markets. The rest of the paper analyses which requirements environmental funds should fulfil in order to effectively contribute to solving the two problems identified.

EF success criteria
Our criteria of success is how effective and efficient the environmental fund contributes to reducing environmental policy weaknesses (as defined in the section) and to overcome the temporary financial market failures. The analysis is based on the experience with environmental funds in transition economies.

1 Throughout this paper, we prefer the loose term environmental investments, rather than the more precise time pollution abatement and control expenditure. While PAC is precisely defined by OECD, see OECD 1996, the scope of environmental funds should not necessarily be limited to investments whose primary purpose is environmental protection. Funds may successfully target “win-win” investments with a dual commercial and environmental purpose.
Section 3 of the paper characterises environmental funds with regard to source of revenue and institutional set-up. It is noted that the role played by the fund depends critically on these two parameters. The section discusses the relationship between the legal and institutional set up of the environmental fund and their ability to address twin problems mentioned above.

Section 4 discusses how the relationship between the design of the environmental fund programme cycle in relation to the ability of the funds to meet their overall objectives. The section notes that a proper identification of the role of the fund and a precisely defined and publicised scope of the fund activities is crucial to success in addressing the two problems.

Section 5 discusses the project cycle. It is noted that a systematic, transparent and accountable project cycle is a prerequisite to spend funds efficiently. The ability to spend funds efficiently is again a sine qua non in addressing the two problems above and indirectly in ensuring popular support for the fund system which will allow to grow to a size enabling it to play a significant role.

Finally, in section 6 the issue is raised whether environmental funds are likely to be temporary and eventually eliminated.

In section 7 the conclusions of the paper are summarised.

2 Main Rationale for Environmental Funds

Subsidies widespread in OECD Subsidies for private environmental investments became widespread in OECD countries in the 1970s concurrently with increased emphasis on environmental policy issues. The subsidies had different forms, viz.: direct grants and soft loans financed from the budget, accelerated depreciation and tax breaks reducing taxation revenues as well as earmarked taxes and charges (for a detailed description, see OECD (1990)).

due to: The basic rationale of environmental subsidies are the same in the “old OECD countries” as in the economies in transition, namely to induce environmental investments that would otherwise not take place (or take place later). The rationale why policy makers would want to induce investments which would otherwise not take place is based on two distinct arguments.

Environmental policy weaknesses The first argument goes that there are weaknesses in environmental policy in particular with respect to 2:

- Inadequate information on the extent and social costs of environmental damage;

Pollution and environmental damage often influence the production and consumption possibilities of other actors than the source of the pollution and this influence is not capture by the market (external costs). Various

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2 These arguments have been adapted from OECD (1995) the St. Petersburg Guidelines
mechanisms have been tried to internalise these costs using the polluter pays principle, but inadequate information (or a biased distribution of the existing information) makes this difficult (even in traditional OECD countries). The economic effects of administrative restrictions (e.g. discharge and emission limits) will be unevenly distributed and lead to “demands” for compensation.

Such demands may be met through investment subsidies, for example through environmental funds. If successful such subsidies may contribute to a policy regime which reduces external costs. This rationale for subsidies / environmental funds is common to OECD and transition economies.

- **Poor enforcement of environmental regulations**;

Poor enforcement may also reflect the biased distribution of existing information referred to above. In transition economies poor enforcement has been exacerbated by a tradition for unrealistic strict administrative requirements (e.g. discharge and emission limits) and recent very poor financial situation of many industrial enterprises which in many cases has led to a conflict between enforcement of environmental regulations and continued financial viability of the enterprise in the short term.

In this situation an environmental fund which subsidises investments which helps enterprises meet (for example air pollution emission) limits may relieve the pressure for continued poor enforcement and may thus provide part of the necessary framework for effective enforcement of environmental regulations. At the same time a well-functioning environmental funds system would help to generate information necessary to design environmental regulations which are based on an acceptable trade-off between environmental ambitions and possibilities for viable production. Such information is highly desirable for effective policy making, not least in relation to the discussion about EU-accession.

- **Lack of emphasis on environmental issues in the traditional budgeting processes**,

Environmental issues play a small role in the traditional budgeting processes in most countries. This is partly due to the inadequate information on the extent and social costs of environmental damage, and partly due to the weakness of many environmental ministries which makes it difficult for them to represent the interests of the environment in the budgeting process.

Environmental funds may be seen to exacerbate this problem or circumvent it, depending on the country and time specific situation, and maybe also depending on the stand point of the observer. By creating one or more environmental funds, an excuse to remove environmental considerations from main stream policies and budgeting is created. On the other hand in some countries there is a political will do “do something” about the environment which is quite strong as long as it is a general statement but
often weakened when confronted with specific trade-offs in terms of production and income (for example in mining or agriculture). In this situation funding for environmental activities may be larger when the political decision is taken at the overall level. Often both effects are active, but which effect is stronger cannot be determined a priori.

- **Poor understanding at local decision making level (enterprises municipalities etc.) of cost-effective solutions.**

Enterprises and municipalities typically have information only about a very limited part of the available technological and institutional possibilities which would enable them to reduce pollution in a cost-effective way. This is a significant problem in OECD countries where intra-industry studies show large variations between the “best” enterprises and the “worst” enterprises in terms of pollution avoidance, abatement and control.

In transition economies enterprises faces additional challenges in the form of rapidly changing relative prices, rapid changes in technology available, and rapid changes in legislative and institutional framework. Naturally, enterprises and municipalities will under such circumstances of extreme uncertainty find it even more difficult to gain an overview of the cost-effective solutions available.

Environmental funds may play an important role as clearing centres of information. However, this requires the funds to have a fairly narrow scope of activities in order to have critical mass to become centres of excellence or to have access to centres of excellence within their scope of activities.

The second objective of environmental funds is to provide (temporary) solutions to temporary failures of financial markets, notably with regard to:

- **Severe financial constraints at (industrial) enterprises, which delay the replacement of outdated, polluting technology;**

These financial constraints in conjunction with the extreme uncertainties and poor access to information at enterprise level lead to a short time horizon of decision making.

This works against the changes in technology and production methods which are necessary to reduce pollution from enterprises.

Environmental funds may reduce the barriers by providing access to information (about technologies etc.), project development capabilities and soft finance.

- **Severe financial and human capacity constraints at municipalities, which delay the introduction pollution abatement and control;**
Municipalities are in a situation similar to enterprises, but their access to capital market finance is often even more difficult than that of enterprises.

Municipalities also find it difficult to introduce full cost recovery based user charges, for example for solid waste or water services. At the same time poorly maintained systems continue to deteriorate.

Again environmental funds may reduce the barriers by providing access to information (about technologies etc.), project development capabilities and soft finance.

- **Underdeveloped capital markets and inadequate banking systems, leading to credit shortage, rationing, high real interest rates and limited availability of financing instruments (in particular for long term financing).**

This is a particular and temporary trait of transition economies. The limited availability of financing instruments for long term financing presents an effective barrier to all long term investments including, but not limited to, pollution abatement and control (PAC) investments. Initially in the transition process, the real rate of interest is high and long term loans are simply not available. Later when real interest rates fall and long term loans become available financial instruments are still limited. Specifically, financial intermediaries find it difficult to transform the future tax revenue of municipalities into acceptable security making it difficult for municipalities to engage in major investment programmes, for example in the water and wastewater services.

What is particular about transition economies?

Earmarked financing mechanism did become a major vehicle of environmental financing in transition economies after 1989, whereas they did not play a major role in the environmental financing systems of OECD countries; see *OECD (1990)*. The difference in policy instruments chosen to address the environmental policy weaknesses discussed above is likely to reflect (i) the influence of the factors mentioned under temporary failure of financial markets, (ii) a preoccupation with the severe funding constraints experienced at many level in the early phases in transition economies;and (iii) a donor focus on environmental issues which lead to technical assistance and other support to the establishment of environmental funds.

Over time both the market failures and the weaknesses in environmental policy will tend to be reduced (but not eliminated) as illustrated in the figure below.

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3 The high real interest rate has also often been a consequence of the structural adjustment process itself. Most countries have found it easier in the initial phase to let a tight monetary policy become the main instrument of macro-economic stabilisation.
The litmus test of environmental funds is whether they increase the speed of the development towards more efficient use of financial markets for environmental investments and towards more effective environmental policies; and whether they are eliminated when no longer needed.

Purpose of paper
The purpose of this paper is to establish the conditions which environmental funds must fulfil in order to pass the litmus test.

Specifically the paper will discuss how the legal and institutional framework, programme planning and project cycle procedures can contribute to addressing the six failures mentioned above, viz.: inadequate information on the extent and social costs of environmental damage, poor enforcement; lack of emphasis in traditional budgeting processes, poor understanding of cost-effectiveness at local decision making level; environmental investment expenditure constrained by financial constraints at local enterprise and municipal level and by poorly developed capital markets.

3 Categorisation of Environmental Funds
The term environmental funds is used to describe a large number of structures at national, regional and local level. Two characteristics have particular influence on the workings of environmental funds, namely their institutional/organisational set-up and their source of funds. This is illustrated in the figure below. For illustrative purposes we have categorised a small number of funds.
There are arguments in favour of a very close link to the ministry of environment and arguments in favour of a more independent status. The arguments are well summarised in Francis (1995):

“Funds established as entities within ministries of environment may utilise existing expertise, and environmental policy and implementation may be readily integrated through the activities of such funds. An independent institution, however, may be relieved of certain political constraints and institutional inefficiencies normally experienced by a governmental agency. On the other hand, with independence the issues of accountability and adherence to government policy become especially important.”

The figure illustrates a relationship between the budgetary set-up and the organisational set-up.

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4 Being a stand alone institution, rather than a department in a Ministry may be a necessary condition for independence, but it is not a sufficient condition. If management is appointed and may be removed by, say, the Minister, there may be a strong incentive not to behave independently. This is re-inforced if the “stand-alone” institution has been created with a system of remuneration which is very attractive compared to the remuneration otherwise available in the public sector. In this case fear of loosing a well-paid job, may put severe practical limits to independence. Unwieldy and / or politically controlled steering committees may be another tool which de facto reduces independent behaviour of EFs.
Environmental funds which are donor or loan funded have traditionally been set up independently of the public administration. This has typically been based on a concern about “political interference” in systems which were integrated into the existing administrative structure.

Furthermore they have been given a limited set of functions traditionally including project identification, appraisal, monitoring and supervision and little more.

National environmental funds which are budget financed have tended to have a very close relationship to their parent ministry. These funds should have found it easier to integrate national environmental policy in their activities.

The argument of ready integration of environmental policies through ministry controlled funds assumes that there is a coherent national environmental policy. However as discussed above, a weak environmental policy framework is one of the characteristics of most economies and in particular transition economies in particular. The so-called national environmental policies are generally ill-suited starting points for stringent programming.

The documents often lack clear priorities, there is often not a well described link between described problems and the stated environmental objectives. When tasks and activities are included in the programmes, systematic analyses of how implementation would affect the environment and thus the attainment of environmental objectives is not available. This is true for most policy documents, for example the Polish National Environmental Policy (1991) and the Hungarian Environmental Protection Programme (1997), see COWI (1998).

In this situation environment ministries often find it difficult to focus the activities of the environmental funds which they control. As a result the problems of political constraints and institutional inefficiencies are reinforced.

It is interesting to note that generally, the funds higher and more to the right in the figure are considered the more successful funds.

However, it is equally interesting to note that this success is not attributed to independence per se, but rather to the ability and willingness of these funds to:

- Introduce stringent and funding programmes with a clear set of priorities;
- focus their scope of activities in line with this programme; and
- introduce and adhere to stringent and transparent project cycle procedures.

Finally, it could be noted that the funds of the CIS countries generally belong to the left bottom corner of the figure. However, some of these funds, for example the Federal Environment Fund of Russia, are working very actively to set

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5 See for example OECD review of Polish Ecofund
priorities in their funding programmes and to introduce stringent and transparent project cycle procedures.

### The budgeting process and environmental funds

It was argued above that lack of emphasis on environmental issues in the budgeting process was one argument for the creation of environmental funds. It was also hypothesised that the creation of environmental funds would initiate two processes: First, funds could be used as an excuse for a further reduction of environmental considerations in the main stream budget process, Second funds could be seen as a vehicle which would provide a lump sum allocation for environmental issues over and above what would be allocated through main streaming.

<table>
<thead>
<tr>
<th>Do EFs increase environmental expenditure?</th>
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<tbody>
<tr>
<td>More when environment is perceived to be crucial</td>
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<tr>
<td>Less when budgets are very constrained</td>
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<tr>
<td>Recurrent cost funding is a trap</td>
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<tr>
<td>Revenue base changes</td>
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Two issues seem to determine which effect is the stronger. First: the perceived importance of environmental issues in general. Countries such as Hungary and Poland where environmental issues were high on the political agenda, there were active “green” citizen groups etc. were also more willing to allocate a sizeable share of the revenues which would otherwise go to the general budget to environmental funds.

During the period where public budgets had to be severely cut the political will to create environmental funds (thus depriving other parts of the budget of revenue) may be smaller. This tendency has been strongly reinforced by IMF for example in Russia. Poland seems to be a key exception to this “rule”, whereas other countries such as Lithuania only started to transfer significant amounts into environmental funds after the most critical years of reduced public spending.

In many cases environmental fund expenditures are used to finance public sector recurrent expenditures. This seems to be a particular problem with regional and local environmental funds. Examples hereof can be found both in Poland and many places in Russia. In these cases, the first effect (reducing environmental expenditure on the normal budget) has sometimes taken over to the extent where wage costs of mandatory staff for environmental supervision and control is financed by the Environmental Fund. The national fund of Ukraine provides an example hereof.

It is our experience that successful environmental funds have minimised the payment of recurrent expenditure.

### Revenue, charges and tariffs

The character of the revenue base has changed. Originally, most or all revenues of environmental funds were from pollution fees and fines. But these revenues were eroded in some place due to inadequate inflation indexation. In the medium to long term pollution fees and fines will be greatly reduced as environmental legislation as a result of more realistic discharge limits and the production of the most polluting industries is greatly reduced due to competitive pressures (this has already happened in most of Central Europe) and pollution is reduced due to changes in technology, investments etc.
Two types of environmental fund revenue have become much more important in most Central European countries:

- **repayment and interest on loans** as environmental funds moved from grant funding to loan funding; and

- **product charges** of various kinds.

**From grants to loans**

Some environmental funds have moved from providing mainly grant funding to providing loan funding. For these funds, loan repayments, and earnings on working capital have become an important source of funds.

**Product charges etc.**

Product charges have been introduced in a number of countries and some have channelled the revenues (wholly or in part) to environmental funds. Hungary provides an example hereof. This is in line with the recommendations of the so-called “St. Petersburg guidelines”\(^6\).

However, often so-called environmental taxes and charges have been “hi-jacked” by fiscal considerations. A tax with an environmental pretext may be designed with a view to maximise revenue rather than with a view to change behaviour in a manner which gives “value for money” in terms of environmental benefits. Unfortunately, the design which maximises revenue is likely to be different from the design which maximises environmental benefits. There are many examples hereof, both from transition economies and traditional OECD economies\(^7\).

**Introducing new revenues**

The environmental funds which are “stuck” with a traditional revenue base have generally been creative trying to introduce new funding sources. Many funds, for example many regional Russian funds have found this very difficult.

In order to introduce new funding sources a number of prerequisites must be fulfilled. Some of those are formal, while others are “real”. The most important “real” pre-requisite is popular acceptance. Popular acceptance of new taxes and charges is closely linked to the perception that these funds are spend productively. This again requires an acceptable purpose and transparency and accountability in spending.

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\(^6\) The St. Petersburg guidelines on environmental funds in the transition to a market economy is a policy paper on the role of environmental funds, revenues for environmental funds and allocation of environmental fund resources. The policy paper was presented and discussed at a conference on environmental funds in Central and Eastern Europe held in St. Petersburg in 1994 and endorsed by the Environmental Action Plan (EAP) Task Force in 1995.

\(^7\) For example in Denmark a wastewater tax was introduced for 1997. The objective: To generate DKK 500 million revenue. Designed by: Ministry of Taxes (with little or no involvement from Ministry of Environment). Environmental effects: reduced organic load from wastewater treatment plants, likely increased load due to higher levels of non-treated run-offs and overflows; higher consumption of energy and chemicals. Total environmental effect: Not assessed.
Both in Poland and in Russia we can find examples of regions (Krakow, Katowice, Ekatarinburg and Saratov) where environmental problems are severe and environmental protection therefore considered an acceptable purpose for public spending. To achieve popular acceptability of additional taxes and charges it is necessary that funds are spent in a transparent way and that environmental funds are accountable for the spending of public funds.

The argument is analogous for the successful introduction of full cost recovery based tariffs for environmental services, like wastewater treatment and solid waste management.

Environmental services were heavily subsidies in early transition economies. As fiscal pressures forced governments to remove first recurrent cost subsidies (all of CEE and most of CIS today) and later investment subsidies from the public budgets (most CEE, but not yet in CIS) user charges had large increases in real terms. Introduction of full cost recovery based charges for environmental services may be one way of implementing the polluter pays principle. Again the design of tariffs and charges are likely be different depending on whether environmental benefits or total revenues are to be optimised. Furthermore distributional concerns are important when deciding on the structure of, say, water, wastewater and solid waste charges.

To achieve popular acceptability of such charges it is necessary that funds are spent in a transparent way and that the population perceives improvements in the service provided. Here the environmental funds may play an important role by enabling the large scale rehabilitation / investment which is typically necessary to cause service improvement.

Some of the most successful funds have introduced transparent procedures and a political institutional set-up with a high degree of accountability and transformed this into high levels of environmental spending. This is likely to be easier at the local and regional level where environmental problems are uniform and solutions felt by a large fraction of those who contribute financially.

The share of environmental fund financing in PAC expenditures may provide one indication of the “success” at a national level of the environmental fund concept, in addressing the financial constraints discussed above. One difficulty with that argument is that funding by environmental funds may have crowded out other funding sources, in which case a high share of funding is of course no longer a “success” indicator. Another difficulty with using environmental fund share of financing as a success indicator is that is says little (or nothing) about the key issue: namely how environmental funds may contribute to addressing the environmental policy weaknesses discussed above.

From 1992 to 1996 the share of PAC investments relative to GDP in Poland was higher than Germany and the Netherlands, in Hungary and Lithuania on par with

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8 Section is based on COWI (1998)
the share in these countries, while Russia and Slovenia was on par with Portugal and PAC investments in Georgia were marginal. It is interesting to note that those countries with high level of PAC investments were also those countries where environmental fund financing constituted 20% to 40% of PAC investments. In the other countries PAC investments were low and the share of environmental fund financing in this lower figure was smaller. This is not likely to reflect a causality from large environmental funds to large PAC, but rather a common favourable policy regime which provided a diverse range of incentives for PAC expenditures including supplementary funding by environmental funds.

The data do not reveal the cost-effectiveness of these investments.

Role of EFs in CEE

The CEE countries have fairly good data for environmental funds financing environmental investments. The figure below shows environmental funds investment subsidies as a percentage of total environmental investments during the period 1990-96 for five selected CEE countries. It gives an indication of environmental funds share of financing. The striking features are:

- Environmental funds are major financiers in Poland, where they finance about 40 per cent of total environmental investments.
- Among the remaining five CEE countries, Hungary has been the country in which environmental funds have played the most important role. In 1996, however, Lithuania and Slovenia also reached a share of about 20 per cent.
- In Russia, environmental funds provide less than 5 per cent of financing.

![Environmental Funds Financing in Per Cent of Total PAC Investments, 1990-96 (current prices)](image)

Figure Notes: 1) The nominator is based on the financing principle since environmental funds are only financiers, not abaters. The denominator is based on the abater principle; thus, environmental funds’ spending are not included in the denominator. Notice, that environmental funds’ spending does not include pollution charge exemption schemes; this mainly affects the figures for Russia. 2) In Slovenia, the Ecological Development Fund was established in 1993, but did not exhibit its full financing potentials until 1996. Its share in 1996 has been calculated on the basis of the assumption that total PAC investments in Slovenia were the same in 1995 and 1996. In Georgia, there are no environmental funds at all.

In the figure environmental funds financing does not include pollution charge exemptions made in accordance with pollution charge exemption schemes that allow enterprises and organisations to deduct environmental expenditure carried out by themselves from the pollution charges imposed on them. This mainly affects the figures for Russia since pollution charge exemption schemes play an important role in Russia today. Furthermore, the environmental funds system in Russia contains barter elements which are not taking into account here.

If officially registered pollution charge exemptions made were included in environmental funds' financing the percentages shares for Russia would be 5.4 per cent in 1994, 23.6 per cent in 1995 and 17.9 per cent in 1996 (instead of 5.3 per cent, 2.6 per cent and 3.5 per cent, respectively).

Pollution charge exemptions are given for investments with an environmental purpose (though not necessarily primary purpose) which enterprises have already implemented. Russian environmental funds have started to include these figures systematically in their reporting and accounting, mainly to boost their collection rates. However, comparing the figures for environmental fund expenditures based on cash revenues with the total including pollution exemption charges may give an indication of the volume of additional environmental investment as a result of the Russian system of environmental funds. Countries with more effective collection (such as Poland) do not necessarily achieve higher additionality since many (most??) of the environmental expenditures financed with funds support would have been carried out anyway.

An indication of the additionality of EFs?

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9 Enterprises and organisations can, subject to approval by relevant authorities, retain pollution charges to fund internal environmental investment projects. In practice, however, the system is far from well-regulated. Enterprises and organisations often make the decision to withhold pollution charges themselves, without any approval by relevant authorities. Furthermore, the control of the projects financed through pollution charge exemptions is very limited; that is, there is no guarantee that pollution charge exemptions are actually used for financing environmental investment projects. Consequently, it is impossible to assess whether the system serves as an incentive to enterprises and organisations to increase environmental expenditure or the system serves as nothing but a hidden subsidy.
4 Programme Planning

The programme cycle is illustrated in the figure below (reproduced from OECD 1995:23).

Figure 4: Programme Cycle

The financing strategy document provides the pivotal link between the overall national environmental policy and the spending allocation policies of the environmental fund. The financing strategy should describe the fund objectives (in relation to national objectives) and set priorities among different environmental issues and different types of recipients. Since the solution of priority environmental problems is generally a long term task, the financing strategy document should cover several years and provides the basis for the annual spending programmes.
Unfortunately, there are few examples of environmental funds publishing such long term financing strategy documents. Most funds publish annual spending plans only. In the absence of a long term strategy document annual spending plans tend to address the issues on an ad hoc basis and sometimes develop into a mere list of projects to be financed.

Part of the problem with weak fund financing strategies can be referred back to the fact that the underlying national environmental policy is deficient in setting priorities and the lack of systematic information on the environmental effects of alternative actions. In this situation funds with very clear financing strategies may be criticised for being biased in relation to the national policy. This is particularly clear for funds controlled by environmental ministries where it may be difficult to publicly assign low priority to any of the many environmental objectives that are all covered in an unprioritised way in the national policy document.

When there is no long term finance strategy document the links between environmental spending allocation and long term environmental priorities are obscured at best and maybe even lost.

The Central Environmental Protection Fund in Hungary did initially publish a strategy document which indicated its long term priorities by environmental problem and eligibility of recipients. However, CEPF decided later to publish only annual spending programmes. The CEPF also uses the concept of spending windows. There are rules regulating how revenues are allocated by spending window and for each spending window there is a set of project eligibility criteria. Unfortunately, the criteria for the main window are very broad, see COWI 1996:Vol 3. The Polish National Fund and the Russian Federal Fund provide only annual spending plans.

Some of the most successful funds, such as the Polish Ecofund (debt for environment swap) and the Krakow Voivod Fund have had clear and published long term financing strategies and have developed clear eligibility and project selection criteria on this basis.

It is possible that the Polish Ecofund was able to ignore such concerns just because it was funded by foreign funds through debt for environment swaps. Similarly, the CEPF did receive not only substantial technical assistance, but also a fair share of PHARE money initially. Finally, in Krakow local air pollution was a dominant environmental problem and the Krakow Fund as a municipal fund was more free to define its own priorities in dialogue with the municipal authorities, local industry and local popular movements.

It has just been argued that a weak national environmental policy framework makes it more difficult for a national environmental fund to establish a strong financing strategy.

However, EU Phare later insisted on accounting for Phare funds according to separate procedures different from those that had been established for CEPF overall with Phare TA.
In assessing the value of environmental funds, the key issue is whether the existence of an environmental fund makes it easier or more difficult to introduce priorities and other necessary improvements in environmental policy. Here the evidence seems to indicate that environmental funds with limited, precisely defined scope may contribute to introducing priorities. The evidence also seems to indicate that funds which are less tightly controlled by environmental ministries and/or have a fairly high share of foreign funding find it easier to draw up a long term financing strategy.

Ministries and theorists have been concerned that independent funds could pursue policy priorities which were poorly harmonised with national priorities. This has been an argument for establishing a very close link between funds and national (regional) environmental administration. While the concern is both sincere and important, the evidence so far does not indicate this to be a major problem in practice.

In the Polish Ecofund, Krakow Voivod fund the priorities chosen were all in line with both the national (regional) document and the recommendations from the second environment for Europe conference in Lucerne 1993. As it turned out, for these three funds spending was heavily biased in favour of addressing air quality problems with health consequences, and to a lesser degree wastewater management and waste management.

5 Project Cycle Management

The St. Petersburg guidelines note that written operational procedures which give a detailed description of each step in the cycle are necessary. The guidelines also note that the procedures should be available to all potential recipients and to the public, see OECD (1995:24). It should be added, that to facilitate project identification, appraisal and selection these criteria should be specific and indicate a method of comparison and prioritisation. In particular cost-effectiveness criteria would seem to serve this purpose.

However, initially published guidelines for project appraisal and ranking were the exception rather than the rule. When criteria were published they were often very broad allowing the funds to finance a variety of projects related to environmental protection. This was for example the case for most Polish funds including the National Fund, see COWI (1997, Vol. II: 44-45).

Recently the Russian Federal State Committee of Environmental Protection (SCEP) has published a set of guidelines for project appraisal and ranking to be used by the Federal Fund and Regional Funds, see Green World (1998, No 7:8-11). Also the Lithuania Environmental Investment Fund has recently published an operating manual which implies that a set of criteria for project ranking will be published, see LEIF (1997:13-14)

These examples indicate a growing appreciation of the need for transparent project cycle guidelines and ranking criteria.
Figure 5: Project Cycle Stages and Corresponding Activities

<table>
<thead>
<tr>
<th>Stages</th>
<th>ACTIVITIES</th>
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<tbody>
<tr>
<td>Project Identification</td>
<td>Project concept is outlined by enterprise/organisation at its own initiative or after encouragement by Environmental Fund</td>
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<tr>
<td></td>
<td>Fund’s initial contact with project promoter</td>
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<td></td>
<td>Rapid Initial Assessment in Fund, resulting in rejection or request for full project application</td>
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<tr>
<td>Project Development</td>
<td>Development of detailed project documentation by enterprise/organisation</td>
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<td></td>
<td>Submission of detailed application to fund</td>
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<tr>
<td>Project Appraisal</td>
<td>Full appraisal of project in Fund assessing:</td>
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<td></td>
<td>• environmental effectiveness</td>
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<td>• technical feasibility</td>
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<td>• financial evaluation</td>
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<td>• implementation feasibility</td>
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<td></td>
<td>• recommendations</td>
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<td></td>
<td>Assessment of project relevance for outside investors (e.g. NPAF), if relevant then contact to investor</td>
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<tr>
<td>Project Prioritisation</td>
<td>Prioritisation in Fund based on:</td>
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<td></td>
<td>• environmental selection criteria</td>
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<td></td>
<td>• compliance with other project eligibility criteria</td>
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<td></td>
<td>• availability of funding</td>
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<tr>
<td>Project Approval</td>
<td>Project approval/rejection in Fund and notification of enterprise</td>
</tr>
<tr>
<td>Supervision</td>
<td>Implementation agreement is signed between Fund and enterprise/organisation</td>
</tr>
<tr>
<td>Monitoring</td>
<td>Funds are disbursed to enterprise/organisation</td>
</tr>
<tr>
<td></td>
<td>Implementation is monitored by Fund and Environmental Authorities</td>
</tr>
<tr>
<td>Project Completion</td>
<td>Results are evaluated by Fund</td>
</tr>
</tbody>
</table>
**Project Identification**

Fund disbursement decision should not be taken on a first come, first served basis. Instead fund management need to acquire knowledge of the most promising project opportunities for each high priority environmental problem.

One of the more promising approaches in practice has been to identify a precisely defined high priority environmental problem for example point source emissions of SO$_2$ in cities and then invite project proposals which address this problem. Proposals can then relatively easy be assessed on a cost-effectiveness basis.

**Stringent eligibility criteria are pivotal**

Stringent general eligibility criteria which precisely define the environmental problem(s) to be addressed, the profile of eligible recipients, implementation arrangements (procurement rules, co-financing requirements etc.) may also contribute to keep the “load” of project proposals manageable and focused on priority projects.

**but difficult in practice**

Stringent eligibility criteria in the sense described above, introduce environmental funding priorities even when national environmental policies are ambiguous. However, many environmental funds have found that such stringent eligibility criteria were unpopular with political decision makers, who themselves had not been able or willing to draw up specific prioritised environmental programmes and / or action plans.

Ideally, the environmental fund institution in this way should contribute to the advancement of environmental policy, but the extent to which this has happened in practice is unclear.

**unless relationship between revenue and spending source is close**

In OECD countries earmarked financing mechanisms have been used mainly to address media - specific or local / regional environmental problems, thus addressing precisely defined problems. However even here, the advantages of earmarking have been most pronounced when direct environmental charges were earmarked and a close relationship existed between the source and spending of revenues, see Lovei (1995:76). One may say, that this has also been the Polish experience where a number of regional funds have been more successful in achieving clear eligibility criteria than the national fund.

**Project Appraisal and Prioritisation**

Two stage procedure

In 1996 few funds including three Polish funds, Ecofund and the Krakow and Katowice Voivod Funds used a two stage application and appraisal procedure with initial screening based on a short project information form, followed by a full appraisal of applications which meet pre-application criteria. However, the procedures of the Katowice fund were not disclosed publicly, see COWI (1997, Vol. 2: 60-61).

Since then a number of funds have introduced two stage application and appraisal procedures, including the above mentioned Lithuanian Fund and the procedures suggested by SCEP, Russia.

Two stage application procedures generally save resources both for the applicant and for the environmental fund.
In the second step a ranking model should be applied. The ranking criteria should be available to the project proponents prior to their submission of applications. The variables and parameter values of the ranking model should be reasonably stable over time.

Ranking should take place within one environmental media only. The distribution of spending between media (or areas of intervention) must be taken at the programme level.

The model serves a dual purpose.

1) It is a tool in project selection.

2) At the same time the model provides feedback to fund management on the implications of the funding priorities as these are reflected in the model for the resulting project portfolio. In this way the model also contributes information on the priorities themselves, thus providing a feedback to the political process of priority setting.

**Project funding strategy**

In some countries, e.g. Russia there has been a heated debate about whether loan or grant financing is better. Two issues seem to be involved. The first issue is the degree of subsidy, the second issue is risk.

A soft loan or a grant may provide the same degree of subsidy to an investment depending on the other parameters of the contract between the environmental fund and the enterprise, notably the required degree of own financing. Thus grant financing does not need to - and normally should not - be equivalent to 100% subsidy of an investment (or activity). The optimal degree of subsidy is the one which just barely ensures that the investment is made.

This is another argument for environmental funds to focus on a reasonably narrow scope of areas of intervention, since it is difficult to build up expertise - or even access to expertise on different types of solutions to many different environmental problems. Fund priorities should be specific enough to provide a rank of problems and to enable a critical mass of expertise to be established, but they should not be (too) specific with respect to identification of solutions to a given environmental problem.

Two types of risk should be distinguished: project risk and credit risk.

**Project risk**

Project risk relates to the ability of the project proponent to implement the project and achieve the intended impacts. This type of risk must be considered no matter what funding type is used.

**Credit risk**

Credit risk relates to the ability and willingness of the project proponent to repay a loan. This type of risk is related to loans and loan guarantees. As a general rule environmental funds will not have the capacity to evaluate this type of risk. They should therefore implement loan agreements via a financial intermediary. For this
service the environmental fund will pay a small fee. This fee will enter as part of the consideration when choosing between loans and grants, but it is unlikely to have a major impact on the decision.

How to choose

The major choice between loans and grants thus becomes one of cash flow profiles for both the environmental fund and the recipient. A loan with the same subsidy element as a grant will provide more cash to the project proponent initially and lead to repayments to the environmental fund later.

**Fund Operation, Supervision and Monitoring**

Funds should tightly supervise and monitor project implementation. Procurement is an issue of particular concern. Even when a national procurement law exists it may be ambiguous and it may be advisable for the Fund to draw up its own more stringent procurement requirements and have these included in funding agreements.

**Transparency is pivotal**

Transparency is another key issue. The public acceptability of many environmental funds is adversely affected by rumours about abuse of fund money.

**Completion and Evaluation**

As stated in the St. Petersburg Guidelines, OECD (1995:26) “An evaluation of project results should close the project cycle. .... Evaluation reports should be prepared indicating all mistakes that have been made, analysing the causes of success or failure of the projects, and assessing the fund’s ability to detect and prevent major break downs. The report should contain recommendations for improving the management of the project cycle, including the process of project identification.”

Unfortunately there are few, if any, examples of systematic evaluation being used to continuously update and improve fund management. This problem is not particular for environmental funds, but well-known even from major aid agencies who have been providing project support for decades.

### 6 Temporary Funds?

All theorists agree that environmental funds should be a temporary arrangement. However, at the same time, it is a well-known phenomenon that once an organisation is established, the organisation develops its own objective and long term growth and survival seems to be foremost among these objectives.

Whether the many environmental funds that has been established in CEE and CIS will eventually be eliminated is a key issue.

Experience from traditional OECD countries is positive in the sense that the funds established, for example in Sweden in the 1970s were indeed temporary (see Lovei, 1995).
Ideally, environmental funds should be eliminated when the twin problems of environmental policy weaknesses and temporary failures of financial markets have been resolved. The latter is likely to occur sooner than the former. One may argue that for example Polish financial markets today are more similar to the EU financial markets than to the financial markets of most CIS countries.

However, precisely in Poland there are some warning signs that the institutional inertia of environmental funds may be substantial. The strong Polish environmental funds are trying to acquire certain banking rights, for example the right to trade on the money market. This does not seem logical from a macro point of view. Similarly the Bank of Environmental Protection (BOS) has been established. Today many commercial banks offer similar services such as administration of loans on behalf of environmental funds, and the commercial banks have often turned out to offer competitive terms to environmental funds for this service. If BOS does not effectively complement the banking services otherwise available, should it be maintained under the control of environmental funds?

The verdict on this issue is still out.

7 The Role of Donors

One final point needs to be mentioned. Environmental funds may serve as vehicles for attracting funds from donors and the international financial institutions.

To do so effectively environmental funds will have to have:

- A convincing programming and project cycle which generates “good” projects;
- Systematic and transparent project cycle procedures;
- Accountable procedures for implementation of loan arrangements; and
- Capacity to deal with a large portfolio.

Interestingly enough, the first three point are also pivotal for environmental funds to be successful in their own right.

However, as argued above, while those countries those countries which have a high level of PAC expenditure coincide with those where environmental funds play a major role in funding PAC investments, this does not imply that environmental funds are the cause. Rather a common enabling policy environment is likely to be the cause. This begs the question: whether the positive “macro” results would be achieved also in the absence of environmental funds and whether the establishment of environmental funds is largely due to donor interest in finding vehicles for disbursement of funds to the environment?
We cannot make a final verdict on this issue.

8 Conclusions

This paper has argued that in order to pass the litmus test (contributing to efficient use of financial markets for environmental investments and contributing to effective environmental policy), environmental funds must fulfil a number of stringent requirements, including:

- stringent programme cycle procedures closely linked to national (regional) environmental policy leading to effective environmental programmes;
- stringent project cycle procedures leading to efficient project selection;
- high degree of accountability, transparency leading to public acceptance and participation;
- minimal funding of (public) recurrent expenditures; and
- additionality vis à vis other funding mechanisms.

The paper has found that in particular in relation to improved project cycle procedures and indirectly in relation to accountability and transparency, environmental funds systems are currently undergoing major improvements.

However, the paper has also argued that the better functioning environmental fund systems seem to be found in countries where the overall policy climate is more favourable to effective and efficient environmental policies, and it has been impossible to determine whether environmental funds in themselves have contributed to this enabling policy environment or whether environmental funds have mainly benefited from it.

List of Literature

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