REGIONAL OVERVIEW

ENVIRONMENTAL FUNDS IN CEEC/NIS: TRENDS, ISSUES AND INSTITUTIONAL STRENGTHENING NEEDS[1]

Patrick Francis
EAP Task Force Secretariat
Environment Directorate - OECD

Introduction

The *Polluter Pays Principle* (PPP), which has been widely adopted by governments in Central and Eastern Europe and the New Independent States of the former Soviet Union, calls upon polluters to use their own resources to finance measures required to comply with environmental standards. Under the PPP, a government's role in combating pollution is to establish a policy and institutional framework from which demand for finance emerges. On the supply side, the PPP provides for certain exceptions to its "no subsidy" philosophy. These exceptions include instances where polluting enterprises would suffer unduly without the subsidy, and may be justified if the size and duration of the subsidy is limited and does not introduce significant distortions in markets. Moreover, subsidies or "soft" finance may be justified for projects where significant externalities are involved such as human health effects, or where there is a potential for serious damage to natural capital or irreversible environmental change.

A number of conditions in *countries undergoing economic transition* also constrain full application of the PPP and impede the emergence or effective use of financing mechanisms characteristic of more mature market economies. These conditions include weak enforcement of environmental legislation, severe financial constraints on enterprises and households, uncertainties in fiscal systems, poorly developed commercial capital markets, and inadequate information concerning costs of environmental damage. Governments in many Central and Eastern European countries (CEEC) and New Independent States (NIS) are making use of earmarked, public environmental funds as a means of meeting or mitigating these challenges. Such funds are typically governmental, or quasi-governmental institutions capitalised by a variety of earmarked revenue sources, including environmental charges and fines. They provide financial support, usually in the form of grant or soft loan, to a wide range of environmental protection activities. (A summary of key characteristics of the funds, including revenues and expenditures, is presented in the attached tables.)

In many CEEC/NIS, funds have helped speed the pace of environmental improvement, leverage additional finance for environmental investments, and strengthen domestic capacities for project preparation and policy implementation. The funds are not, however, without their real and potential drawbacks, many of which are considered in this paper. The opportunities and limitations associated with environmental funds in CEEC/NIS are also analysed in two other OECD publications: the "St. Petersburg Guidelines on Environmental Funds in the Transition to a Market Economy" and "Environmental Funds in Economies in Transition" (both 1995). Though not a "first best" policy option, the funds can be effective and efficient mechanisms for financing environmental protection, *provided* they are appropriately designed and operated, as called for in the St. Petersburg Guidelines.

Evolving Role and Importance of Funds

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Even as many CEEC/NIS begin to benefit from successful reforms and to make progress through the "transition" period, environmental funds, endorsed as potentially effective *transitional* instruments, continue to play significant roles in financing environmental protection in the regions. Indeed, the important role being played by the funds was once again acknowledged by governments and their Ministers of Environment at the latest "Environment for Europe" Ministerial Conference, held in Arhus, Denmark in 1998. Recognising that they exist in dynamic settings, many *funds are actively seeking their niche amidst changing economic and environmental circumstances*. Long-established funds are evolving, with some devising long-term development strategies and even considering post-transition scenarios for themselves. These strategies and scenarios include a wide range of options, from "privatising" and transforming into commercial banks, to being consolidated into the state budget (as has happened recently in Hungary and soon will in Estonia). At the same time, new funds are being created and *environmental funds, of one form or another, now exist in most countries of the regions*. Since 1994 new funds have been created in Slovenia, Bulgaria, Russia, Latvia, Lithuania and FYR Macedonia.

The evolution, effectiveness and potential of the funds is closely linked with the broader progress being made by CEEC/NIS with economic and political reforms, as well as with developments in national environmental policy frameworks. While funds may help to overcome some of the environmental financing challenges encountered during the transition period, they are not substitutes for fundamental reform and should not be expected to fully mitigate shortcomings in such reforms. Significant differences in the development and potential of the funds can be seen between the CEEC, where reforms have been fairly steady and are advanced, and the NIS, where reforms have been less consistent and extensive.

The amount of revenues administered by the funds gives some illustration of such fundamental differences. In 1997, aggregate revenues of the eight CEE "national" environmental funds surveyed in this publication (which excludes the Polish and Bulgarian EcoFunds, which nevertheless operate nation-wide, and the Cracow Provincial Fund), totalled about 720 mln USD, or 9.44 USD/capita. In contrast, the corresponding figures for the eight NIS "national" environmental funds surveyed (which excludes Russia's National Pollution Abatement Facility), are about 36 mln USD, or 0.16 USD/capita. Even within the CEE and NIS regions the funds differ dramatically, at least in size. The 1997 revenues of Russia's Federal Environmental Fund (~ 18 mln USD), for instance, exceed the combined revenues of all other national funds in the NIS for that same year (~ 17 mln). The same can be said of Poland's National Fund for Environmental Protection and Water Management, whose 1997 revenues of about 403 mln USD surpass the aggregate revenues of the other CEE national environmental funds that year, ~ 317 mln. Awareness of such significant differences among the funds, as well as those of the settings in which they operate, should prove useful when considering the information presented elsewhere in this *Sourcebook*.

Institutional and Legal Status of Funds

The institutional set-up and legal status of funds varies considerably across the region: from largely independent, extra-budgetary legal entities with their own institutional infrastructures, to essentially Ministry of Environment (MoE) budget-lines administered by MoE staff. Some funds have been created as non-profit foundations (e.g. Polish "EcoFund"), some as government owned joint-stock companies (e.g. the Slovenian Environmental Development Fund), others as special purpose "state institutions", while the legal status of some funds is rather ambiguous (particularly in the NIS). *The lack of an appropriate institutional set-up and clearly defined legal foundations can seriously hinder a fund's effectiveness.* Such obstacles have led to the following institutional strengthening needs at some funds:

- *Greater political independence would allow for increased effectiveness and efficiency at many funds in the regions.* Political interference is reducing the effectiveness of some funds by

compromising their ability to allocate resources in an objective, transparent and efficient manner. Undoubtedly, political authorities, such as Ministers of Environment and Members of Parliament, have an essential role to play in identifying national environmental priorities and in setting the necessary policy and institutional framework to guide the funds' activities. However, both the St. Petersburg Guidelines and best practice in the regions suggest that this role should not include unmitigated authority to determine which specific individual projects receive financial support, as is now the case at some funds. More carefully formulated legal foundations and decision-making structures and procedures at funds could better balance the powers of key stakeholders and provide the institutional independence necessary for funds to allocate resources objectively and cost-effectively.

- *Some funds lack sufficient guarantees that their resources will be used for environmental protection purposes*. On occasion, the resources of some funds have been used to finance activities outside their mandates, sometimes even entirely unrelated to environmental protection. Such incidents seriously erode the ability of those funds to support environmental protection and diminish their institutional credibility and long-term viability. "Raiding" of fund budgets by other government institutions is particularly damaging to institutional credibility. Stronger, more explicit fund statutes and policies can reduce these problems, as can decision-making procedures that ensure accountability. Protection of fund budgets from "raiding" by other government entities, however, requires high-level political support.
- *Funds based within the institutional structures of MoE may have difficulties attracting and retaining the necessary specialists*. Funds in ministries are constrained by government administrative procedures and salary structures. The expertise required to manage and operate a fund effectively, especially in the areas of economic and financial analysis, are unlikely to be present in many MoE, and may be more expensive to recruit on the open market than a ministry-based fund can afford. Solutions might include intensive training for fund/ministry staff, contracting outside experts to provide certain services, or moving the fund outside of the ministry. The latter option, while offering a number of possible advantages (e.g. greater political independence and the ability to attract staff having financial expertise), also presents several challenges, such as maintaining appropriate links and relations between the fund and the MoE and establishing a suitable legal basis for the fund.

Fund Revenues

Revenue sources for the funds continue to evolve, with some sources diminishing or even disappearing, others expanding, and entirely new sources being created. While there are some exceptions, *most of the funds have enjoyed increasing revenues in recent years*, at least in nominal terms. For example, in 1994 the aggregate revenues of the eight CEE national environmental funds surveyed totalled about 591 mln USD (nominal value based on average annual exchange rates), while the figure for 1997 was 720 mln. The corresponding figures for the eight NIS national environmental funds are about 15 mln USD in 1994 and 36 mln in 1997. These revenues come primarily from charges and fines on pollution (e.g. air emissions and wastewater discharges), as well as from charges on natural resource use (e.g. water consumption, mining) and particular products (e.g. fuel, packaging). For some funds (in Slovenia, Estonia and the Czech Republic), proceeds from privatisation have provided significant revenues while other funds (e.g. in Poland and Russia) have generated substantial profits from their own financial operations. As the provision of loans has become a more important form of disbursement for many funds in the region, income from loan repayments (often with interest) has also increased. Foreign sources are also increasingly contributing to the revenues of funds in the regions: two funds have been formed on the basis of debt-for-environment swaps (the Polish and Bulgarian EcoFunds); Slovenia's Environmental Development Fund and Russia's National Pollution Abatement Facility (NPAF) have been capitalised, at least in part, by World Bank loans, and; new "environmental investment funds" have been created in Latvia and Lithuania with start-up capital pledged by the EU.

Notwithstanding these developments, *increasing the level and stability of revenue flows remains a priority among the funds*. Fund revenues are extremely limited in some countries, (particularly the NIS), where economic reform is at an early stage and financial hardship is being experienced in the public, private and household sectors. Moreover, many funds must plan under conditions of considerable uncertainty, as some revenue flows fluctuate significantly from year to year and/or are affected by annual negotiations in government or parliament. Issues confronting the funds as they endeavour to enhance their revenues include the following:

- *The design and implementation of economic instruments, upon which most funds rely for the majority of their revenues, could be substantially improved in most countries*. Though not usually responsible for their development and enforcement, most funds are highly dependent upon economic instruments (such as pollution charges and fines) for their revenues. Funds in some countries benefit from significant revenues generated by well-functioning economic instrument frameworks (e.g. in Poland and the Czech Republic). Other countries, however, are just starting to modernise their policy frameworks and economic instruments are being newly introduced or reformed. The revenue raising and incentive dimensions of economic instruments in many countries of both regions are adversely affected by low base rates (of charges and fines), overly complex administrative systems, and poor enforcement. In all CEEC/NIS, enforcement of these instruments poses opportunities and challenges: stricter enforcement can lead to more efficient collection of revenues and potentially greater income for the funds; but, increased enforcement should, over time, lead to reduced pollution and, therefore, possibly lower revenues from charges and fines. At the same time, strengthened enforcement should prompt more environmental investment, perhaps stimulating greater demand for finance from the funds. *The inter-relations between economic instruments and the funds, and their respective roles as policy tools, should be carefully examined by the appropriate authorities in each country* (e.g. Ministries of Environment and Finance and the funds).
- *The funds should develop strategies that would allow them to generate predictable revenues at levels sufficient to fulfil their basic mandates through the transition period*. In some countries this may principally involve the diversification of revenue sources (beyond the traditional charges and fines on emissions) and possibly the introduction of new sources (e.g. product charges, CO_2 tax). In other countries, the funds may achieve greater stability and self-sufficiency by generating more revenues from their own financial operations and improved cashflow management. One approach which is being utilised by some funds in the regions is an increased reliance on the provision of loans, which helps the funds to recover some of their expenditures which they can then use again to support additional projects. The skills and resources required to effectively manage loans, however, can be different and scarcer than those required to administer grants. (The provision of soft loans also raises a number of other concerns, some of which are discussed below.) In assessing current and possible future revenue sources and flows, *the funds should consider how changing economic circumstances and environmental needs (including compliance with EU standards) are likely to affect demand for their resources*.
- *Some funds could take greater advantage of foreign sources of revenue*. A number of international financial institutions (IFIs), multilateral aid programmes, and bilateral aid agencies collaborate with partner institutions in CEEC/NIS in the financing of environmental projects. Some funds in the region are already serving as such partners; with the initiative and commitment of national environmental authorities and senior fund managers, more funds could do likewise. Funds seeking major capital contributions from foreign and international organisations should, however, be prepared to meet high standards of performance, particularly in the areas of project appraisal and selection, accountability and transparency. Existing mechanisms and fora for facilitating communication and co-operation between IFIs, donors and funds could be used more effectively and additional opportunities for co-operation could be created. *As called for in the 1998 Arhus Ministerial Conference declaration, donors and funds should work together more closely in building the funds' capacities as financing partners*.

Fund Expenditures

The expenditure focus of the funds varies among countries and institutions according to a number of factors: national environmental priorities; source and level of demand for environmental investment finance; the particular niche played by a given fund vis-à-vis other domestic environmental financing institutions; size and source of revenues, and; long-term institutional development goals. *Pollution abatement investments in the air and water sectors appear to dominate the expenditures of most funds*, particularly in CEEC. At certain funds, expenditure on environmental monitoring, waste management and nature protection is also significant. Environmental education receives very limited support from most funds and some have spent substantial sums (proportionally) in areas falling outside the main environmental sectors. Revenues of some funds, particularly in the NIS, are too low to allow significant spending on capital investment projects, and are commonly allocated for non-investment activities (e.g. operational costs of environmental authorities, international co-operation, experience exchange).

Approaches for determining how to allocate resources also vary among the funds, with some having very clearly defined and focused priorities and eligibility criteria for project identification and selection, and others broader, more inclusive strategies. Most CEE funds use standardised evaluation procedures to compare and rank projects against set criteria, while others, particularly in the NIS, tend to deal with funding requests on a case-by-case basis. Some funds strive to select projects that are the least-cost, or most cost-effective options, while for other funds projects having short implementation times may be preferred. Given that the supply of finance for environmental protection in CEEC and NIS is limited (very much so in some countries), effective and efficient use of the available resources is critical. Accordingly, many funds in the region could improve the effect of their expenditure by addressing the following issues:

- *Clearly defined priorities can help the funds magnify the environmental impact of their expenditure*. Most funds in the regions have very broad and inclusive priorities, reflecting the sometimes all-encompassing nature of their country's national environmental policies. These policies usually do not translate easily into clear priorities for investment, prompting funds to either formulate their own priorities or to operate, in effect, without clear priorities. As the funds' financial resources are scarce, they cannot possibly address all environmental problems effectively. In such circumstances, the appropriate *government and fund authorities should make greater efforts to identify the funds' particular comparative advantages vis-à-vis other environmental policy tools and sources of finance, and should focus the funds' activities accordingly*. This will increasingly be true as other sources of finance for environmental protection emerge, as is now happening in some countries, particularly CEEC. The more action-oriented national environmental strategies and plans that have been developed recently in some countries (e.g. the Baltic States), and the CEE countries' EU accession strategies, propose specific priorities for environmental investments and could provide useful guidance for the targeting of fund resources.
- *Most funds could generate greater environmental benefits by implementing more rigorous project identification, appraisal and selection procedures, emphasising the cost-effectiveness of projects*. Funds in both CEEC and NIS employ a wide range of procedures and criteria in identifying, appraising and selecting projects for financing. Many funds receive far more applications for financial support than they can possibly satisfy, often including proposals for projects which fall outside of the funds' priorities or which are insufficiently prepared. Use of preliminary screening mechanisms would allow the funds to fairly quickly identify and eliminate unqualified projects, thus saving them (and unsuccessful applicants) valuable resources. Additionally, while project costs are usually assessed by the funds, the cost-effectiveness of projects is often not given the importance it should. Other factors are often more decisive in determining which projects are selected for financing, resulting in less environmental benefit for the resources expended. *Funds should strive to improve their economic and financial project appraisal capacity* to be able to

identify a given project's need for subsidised finance more precisely and in order to leverage finance from other sources more effectively, thus allowing the funds to stretch their resources further and support more projects.

- *Funds could better protect themselves from criticism and promote stronger public support for their activities by increasing the transparency of their resource allocation decision-making*. When funds base their project appraisal and selection on criteria which are clearly defined *and explicitly communicated* to applicants in-advance, they are in a stronger position to justify their decisions for either approving or rejecting projects. By making operational policies and procedures clearly known to actual and potential clients, and by actively sharing information about their expenditure decisions (and environmental effects thereof) with the general public, the funds can generate greater support for their activities. A clear commitment to objectivity, transparency and accountability in decision-making will also build a fund's international credibility as a financing institution and potential partner.

The funds also employ a variety of disbursement mechanisms for delivering their financial support. The dominant form of financing, g*rant giving, is increasingly being complemented or replaced by the provision of soft loans and other, more commercially-oriented, forms of subsidy*, such as loan guarantees and equity investments, although limited experience with these latter two forms of financing has been mixed. As funds have diversified their disbursement mechanisms, something of a debate has emerged surrounding the two dominant forms of financing – grants and soft loans – with the latter often being promoted as more "market-based" than the former. *Both grants and soft loans, however, are forms of subsidised finance and each has its own advantages and disadvantages*.

Direct grants are the most attractive form of subsidy for applicants because there is no requirement for repayment. They are also relatively simple for the funds to administer and involve little financial risk. As shown by the experience of the Polish EcoFund (see "Swapping Debt for the Environment: The Polish EcoFund", OECD 1998), when used in a very selective and targeted manner, direct grants can also be effective in leveraging other sources of finance (provided they exist). The major drawbacks of direct grants are that of "moral hazard" sometimes associated with "free" money and, at least from a fund's perspective, that no portion of the resources return to the fund. Soft loans, in addition to promising a financial return to the fund and thus providing it some level of financial self-sufficiency (a key attraction for fund managers), may encourage greater financial discipline on the part of borrowers and reduce moral hazard. However, soft loans do raise certain concerns that should be considered carefully by the funds. These include: the risk of default; the erosion of the real value of repayments by inflation; typically high administrative costs of making and managing loans (usually significantly higher than those associated with grant provision), and; generally lower scope for leveraging other (especially commercial) sources of finance compared with the leveraging potential of grants.

EU Accession: Role of the Funds and Implications for their Operations

In many applicant countries, environmental funds are likely to play a key role in financing environmental investments that are important for EU accession. The costs of meeting EU environmental standards in the applicant countries is going to be very high; one commonly quoted estimate is 120 billion ECU (~140 bln USD). While this figure dwarfs the annual expenditures of the funds in the CEE region, those expenditures are nevertheless significant on a regional scale and account for important shares of total national environmental investment expenditure in certain countries. For example, a recent OECD study found that in 1996, environmental funds accounted for about 33% of total environmental investment expenditures in Poland, whereas the comparable share for funds in Hungary, Slovenia and Lithuania was about 20%. Of the 10 candidate countries in CEE, nearly all have environmental funds operating at the national and/or local levels. The aggregate environmental expenditures in 1997 of the CEE funds surveyed for this publication total almost 700 mln USD; the

added expenditures of other environmental funds in the region not surveyed here (particularly the numerous Polish provincial/local funds), would bring that figure to *over 800 mln USD.*

Some funds are also likely to play an important role vis-à-vis the growing amount of EU financial assistance being made available to support environmental investments in applicant countries. Funds in some countries (e.g. Poland, Lithuania, Slovenia) have already been administering financial assistance from the EU for environmental protection. A number of new initiatives sponsored by the EU are likely to involve more of the funds either directly (as implementing agencies) or indirectly (as co-financiers). These initiatives include: a "Large Scale Infrastructure Facility" with 150 mln ECU for 1998-99 which co-finances investments in the environment and transport sectors; an "Instrument for Structural Policies for pre-Accession" which will provide 1 bln ECU/year from 2000-2006, again for investments in the environment and transport sectors; PHARE Programme support in a range of areas, including environment; and, a special "pre-accession facility" established by the European Investment Bank with 3.5 bln ECU to be lent through 2000, much of which is expected to go into environmental infrastructure investments.

Besides conforming with basic standards and principles, such as those set out in the St. Petersburg Guidelines, funds interested in administering EU financial assistance will be expected to meet further requirements specific to the EU and its assistance programmes. Some of the more important of these include:

- project eligibility, appraisal and selection criteria compatible with accession priorities, (e.g. certain types of projects will be of higher priority than others; project size and the participation of other co-financiers may be crucial);
- competitive procurement procedures compatible with EU procurement rules;
- accounting, financial management and audits consistent with recognised EU standards;
- reporting to EU authorities (which also implies enhanced external relations and foreign language capacities).

EU accession will also affect the funds' post-accession roles as mechanisms for channelling state aid for environmental projects in so far as the funds' assistance benefits private sector enterprises directly or indirectly. *Funds in accession countries may be found by the European Commission to be incompatible with the principles of a common market within the meaning of art 92 of the EU Treaty and therefore in violation of Union rules concerning competition and state aid for environmental protection*. EU rules do provide for exceptions allowing state aid. However, it will be incumbent upon the candidate countries to acquire prior authorisation from the European Commission as to their eligibility for at least one of the exceptions under article 92 of the EC Treaty. In considering country applications the European Community uses, among others, the "Guidelines on state aid for environmental protection" published in 1994. Until such authorisation is granted the operation of environmental funds may be considered illegal. To achieve authorisation, it is likely that the candidate country will be required to:

- specify clear environmental targets to be achieved by the funds;
- specify a limited duration of time, after which these targets will have been achieved and the exceptional state aid will have been discontinued;
- justify why the environmental funds, and not merely the state budget or some other mechanism, in particular those more clearly compatible with the Polluter Pays Principle, are necessary for achieving these targets;
- provide a detailed description of the beneficiaries eligible for assistance from funds, of aid mechanisms provided by the funds, of terms, conditions and rates of assistance as well as of supervisory schemes;

- convincingly justify the eligibility of the proposed funds for the exception from the general prohibition of the state aid under one of the points in article 92 (2) and (3) of the EC Treaty. In order to achieve this eligibility reforms in the funds' operations may be required.

Pollution Charge "Offsets" and Non-Monetary Transactions: Challenges for NIS Funds

The hardships being experienced in the NIS as they undergo economic reforms are posing serious challenges for environmental funds (as well as other environmental and government authorities). Weak legal foundations and federal governments which are struggling to find revenues leave the funds vulnerable to uncertain futures and persistent threats of being consolidated into the state budget. Moreover, in an economic environment where many municipal budgets are in deficit, numerous households are experiencing real declines in welfare and enterprises often evade tax and wage obligations, implementation of the Polluter Pays Principle is truly difficult. These challenges are evident in the practices of pollution charge "offsets" and non-monetary transactions, engaged in by some regional and local funds (e.g. in Russia and Kyrgyzstan) but affecting national funds as well given that most of their revenues originate as transfers from the sub-national funds.

Pollution charge offsets involve the forgiveness of a polluter's emission charge payments by environmental authorities in exchange for a commitment by the polluter to use those resources to implement environmental protection measures. Some argue that such offsets could represent a more direct form of the Polluter Pays Principle and offer administrative efficiency gains, as the polluter retains resources to implement pollution reduction measures, instead of transferring them to the fund to be allocated subsequently for other measures. *However, the offset schemes functioning in NIS typically suffer a number of serious defects*:

- There is little certainty that withheld payments are actually used to finance environmental protection measures, and the environmental benefits generated by measures actually implemented are difficult to verify due to the inherent lack of transparency in the offset transactions and the fact that the monitoring and enforcement capacity of environmental authorities tends to be weak. The situation is worsened when offsets become routine and polluters withhold payments without prior consent from the authorities.
- The offsetting of environmental charges provides an additional window for income tax evasion by firms as long as the charges can be deducted from their income tax base without having actually been paid (which is the case in at least some NIS). Firms therefore have an incentive to maximise the value of levied, *but not collected*, environmental charges in order to minimise their tax liabilities.
- The offsetting of charge payments, (which should be considered *public* funds), against the internal environmental expenditures of enterprises threatens potential efficiency gains which might be captured through the funds' re-distributive function because money must be spent in the debtor enterprise even if investing elsewhere would bring greater environmental benefits. For the same reason, offsets undermine the funds' ability to serve as strategic tools for implementing environmental policy because the debtor polluters, not the public authorities, effectively determine how the public's revenues are spent.
- Charge offsets contribute to the dispersion of environmental finance. Local authorities have incentives not to collect environmental charges, because once collected, the revenues should be shared with environmental funds at higher levels of government. By offsetting charges all revenues are retained at the local level thereby making it difficult to accumulate the critical mass of capital needed to finance major environmental investments.
- Last but not least, as is widely recognised in fiscal policy, discretionary offsetting of any payables to the government undermines the credibility and hence effectiveness of the collection system.

The fact that many regional and local level funds in the NIS are engaging in *non-monetary transactions* reflects serious weaknesses in the region's economies as well as weaknesses in environmental policy and enforcement. Such transactions can be associated with some of the same problems that arise with charge offsets (e.g. window for tax evasion, the undermining of potential gains in cost-effectiveness of investments). Moreover, they form a serious obstacle to the flow of real money to environmental investments and make it difficult to distinguish between paper records of investments and real financial flows.

NIS authorities at environmental administrations, funds and other government institutions are pursuing environmental objectives under admittedly adverse conditions. Pollution charge offsets and the facilitation of non-monetary transactions among polluters, while perhaps providing the authorities some leverage in promoting environmental protection measures, appear in practice to benefit polluters more than the environment. Moreover, these practices, and the considerable level of administrative discretion they involve, contribute to already worrying "shadow economies" and weaken the rule of law. *They should, therefore, be strictly curtailed until the rule of law is firmly established and to ensure that the funds do not inhibit or distort the environmental and economic reforms so critically needed in the region.*

Impact of Funds on Market-Based Financing Mechanisms and the Polluter Pays Principle

The provision of subsidised finance for environmental protection in CEEC and NIS has been deemed necessary to confront the legacy of past environmental misuse and to overcome a number of obstacles existing in the transition period which prevent full implementation of the PPP. As these countries continue to progress through the transition period, however, opportunities for the use of other, more market-based, sources and forms of environmental financing will emerge (e.g. commercial banks, equity investors, bonds, own resources). Indeed, some of these sources and mechanisms are already involved in financing environmental investments in the regions, especially the CEEC. *MoE and fund officials should, therefore, regularly assess the impact the funds are having on the emergence of market-based financing mechanisms and take steps to ensure that the funds are not impeding their development.*

While there is little empirical evidence to suggest that soft finance provided by the funds is inhibiting other sources from financing environmental investments, anecdotal evidence suggests that the risk is real, particularly where the funds disburse very significant sums (e.g. Poland and Czech Republic) and commercial sources of finance are, or show potential to soon become, involved in environmental investments (e.g. advanced CEEC). This risk is likely to grow in CEEC engaged in EU accession, given that EU financial assistance flowing to those countries is expected to expand substantially and be disbursed for investments in a relatively short period of time. Prioritising investments, identifying needs for subsidised finance, and devising financing schemes that will ensure appropriate and cost-effective use of the available finance (domestic and foreign) will be a major challenge for officials of applicant countries and EU institutions.

As capital markets develop in both CEEC and NIS, and the need for subsidised finance among the funds' clients diminishes, the funds should assess the effect the magnitude of their expenditures and their different disbursement forms have with respect to *leveraging* clients' own or commercial sources of finance. The funds should seek to maximise their leveraging effect and actively support the development of more market-based financing mechanisms, ultimately leading to stricter, more direct implementation of the PPP by encouraging greater responsibility among polluters and resource users for the financing of environmental protection. As such responsibility becomes stronger throughout the regions it should be expected that the funds will undergo continued change, perhaps dramatic in some cases, and that the region might eventually witness not only the creation of new funds, but also funds which have fulfilled their mission and are no longer needed.

Table 1. Key characteristics of selected environmental funds in CEE. (Revenues and expenditures in mln USD[1].)

	Bulgaria: National Environmental Protection Fund	**Bulgaria:** National Trust EcoFund	**Czech Republic:** State Environmental Fund	**Estonia:** Central Environmental Fund	**Hungary:** Central Environmental Protection Fund
Operational in current form since	1993	1996	1992	1990	1993
Total income/expenditure [2]	Income/Expenditure	Income/Expenditure	Income/Expenditure	Income/Expenditure	Income/Expenditure
1993	3.60 2.18	- -	94.94 98.41	n.a. n.a.	29.90 17.19
1994	4.42 3.42	- -	155.93 123.11	0.93 1.08	61.13 25.61
1995	5.94 6.25	- -	186.87 183.84	1.78 1.83	55.32 26.30
1996	6.14 8.48	5.53 -	197.21 169.55	6.78 5.41	93.22 53.85
1997	9.49 4.38	5.24 0.39	167.15 103.97	7.69 8.78	80.99 84.56
Major revenue sources in 1997 (with % of total revenues)	– Liquid fuel charge (78.4%) – Privatization (13.8%) – Administrative fees (3.7%) – Environmental fines (2.5%) – Loan repayments with interest (1.6%)	– Debt swap with Switzerland (80.6%) – Profits from financial operations (15.9%) – World Bank grant (3.4%)	– Air/water/waste/land use charges & fines (51.5%) – Privatization (28.3%) – Loan repayments with interest (14.8%) – Profits from financial operations (6.1%)	– Environmental charges and fines (46.2%) – Privatization (27.4%) – Mineral extraction charges (17.8%) – Packaging excise tax (3.4%) – Loan repayments with interest (2.3%) – Other (2.9%)	– Fuel charge (46.9%) – Other product charges (30.8%) – Privatization (6.6%) – Environmental fines (4.7%) – Mining annuity (1.5%) – Phare grant (4.1%) – Loan repayments with interest (5.1%) – Other (0.3%)
Major fields of expenditure in 1997 (with % of total annual environmental expenditures)	– Air (9.3%) – Water (43.7%) – Waste (16.8%) – Monitoring (20.5%) – Soil protection (8.3%) – Others (1.4%)	– Air (49.7%) – Water (49.9%) – Nature protection (0.5%)	– Air (36.5%) – Water (57.4%) – Waste (1.8%) – Nature/soil/landscape protection (4.2%)	– Air (1.9%) – Water (33.3%) – Waste (10.1%) – Building program (19.3%) – "Supervision" (11.9%) – Other (23.5%)	– Air (21.6%) – Water (15.4%) – Waste (13.9%) – "Public purposes" (22.1%) – "Government decisions" (10.4%) – Other (16.6%)
Primary disbursement mechanisms in 1997 (with % of total disbursements for environmental projects)	– Grants (76.8%) – Interest free loans (7.7%) – Equity investments (15.6%)	– Grants (85.2%) – Interest free loans (14.8%)	– Grants (55.4%) – Soft and interest free loans (43.9%) – Interest subsidies (0.6%)	– Grants (89.6%) – Interest free loans (7.6%) – Soft loans (2.8%)	– Grants (~ 75%) – Interest free loans (~ 22%) – Soft loans (~ 3%)

Sources: Fund surveys appearing in this publication.

Notes: 1) Nominal values based on average annual exchange rates; 2) Income data excludes start of year balances; expenditure data excludes overhead & administration costs and other non-environmental expenditure of the funds; expenditures may exceed revenues for a given year because of income carried over from previous years. "n.a." indicates that the information was either not available or not provided by the fund.

Table 2. Key characteristics of selected environmental funds in CEE. (Revenues and expenditures in mln USD[1].)

	Poland: National Fund for Environmental Protection and Water Management	**Poland:** EcoFund	**Poland:** Cracow Provincial Fund for Environmental Protection & Water Management[2]	**Slovak Republic:** State Environmental Fund	**Slovenia:** Environmental Development Fund
Operational in current form since	1989	1992	1993	1991	1994
Total income/expenditure[3]	Income/Expenditure	Income/Expenditure	Income/Expenditure	Income/Expenditure	Income/Expenditure
1993	266.70 204.94	8.85 4.62	2.03 1.00	31.89 34.94	- -
1994	338.06 278.89	10.16 14.32	12.13 5.79	30.51 31.38	2.02 -
1995	481.58 428.44	29.64 20.48	19.13 6.51	35.59 34.35	10.41 0.60
1996	432.60 510.12	31.30 21.64	17.16 19.05	40.19 40.62	15.11 10.52
1997	418.61 389.67	33.58 36.52	14.84 17.03	30.99 28.94	20.43 17.81
Major revenue sources in 1997 (with % of total revenues)	– Environmental charges (53.6%) – Environmental fines (1.3%) – International loans and grants (3.6%) – Loan repayments with interest (35.7%) – Profits from financial operations (5.8%)	– Debt swaps with U.S., Switzerland, France and Sweden (83.8%) – Profits from financial operations (14.9%) – Grant from Norwegian Government (1.3%)	– Environmental charges (57.5%) – Environmental fines (3.2%) – Loan repayments with interest (24.4%) – Profits from financial operations (14.9%)	– State budget allocation (23.1%) – Air/water/waste charges (73.3%) – Air/water/waste fines (2.1%) – Profits from financial operations (0.9%)	– Privatization (40.4%) – World Bank loan (26.8%) – Loan repayments with interest (23.1%)[4] – Interest (8.2%) – Land use fines (0.8%)
Major fields of expenditure in 1997 (with % of total annual environmental expenditures)	– Air (33.2%) – Water (39.0%) – Mining related (9.0%) – Soil protection (8.9%) – Nature protection (3.4%) – Emergencies (1.8%) – Education (1.6%) – Monitoring (0.8%) – Other (2.5%)	– Air (56.0%) – Water (41.3%) – Nature prot. (2.7%)	– Air (56.9%) – Water (25.4%) – Waste (0.6%) – Emergencies (6.8%) – Monitoring (4.0%) – Soil protection (1.7%) – Noise protection (1.5%) – Other (3.1%)	– Air (26.9%) – Water (55.0%) – Waste (9.5%) – Nature protection (2.3%) – Education (1.3%) – Research (1.1%) – Other (3.9%)	– Air (73.5%) – Water (21.7%) – Waste (4.8%)
Primary disbursement mechanisms in 1997 (with % of total disbursements for environmental projects)	– Soft loans (61.2%) – Grants (30.9%) – Interest subsidies (2.5%) – Equity investments (5.1%)	– Grants (100%)	– Grants (25.4%) – Soft loans (74.6%)	– Grants (100%)	– Soft loans (100%)

Sources: Fund surveys appearing in this publication.

Notes: 1) Nominal values based on average annual exchange rates; 2) Poland has a number of provincial environmental funds; the Cracow Fund is one of the largest of these and is presented for illustrative purposes. 3) Income data excludes start of year balances; expenditure data excludes overhead & administration costs and other non-environmental expenditure of the funds; expenditures may exceed revenues for a given year because of income carried over from previous years. 4) The fund also administers 277 loans extended by the Slovenian MoE before the fund was established, the value of which amounted to USD 14.8 million as of 31.12.1997.

Table 3. Key characteristics of selected environmental funds in NIS (Revenues and expenditures in mln USD[1].)

	Belarus[2]: Republican Environmental Fund	**Kazakhstan:** National Environmental Protection Fund	**Kyrgyzstan:** Republican Environmental Fund	**Moldova:** National Environmental Fund	**Russia:** Federal Environmental Fund
Operational in current form since	1993	1993	1992	1993	1992
Total income/expenditure[3]	Income/Expenditure	Income/Expenditure	Income/Expenditure	Income/Expenditure	Income/Expenditure
1993	1.87 1.56	3.09 2.77	0.08 0.08	0.02 0.02	3.66 2.70
1994	0.44 0.39	4.03 2.87	0.17 0.16	0.02 0.02	9.50 7.54
1995	3.35 2.97	1.79 1.68	0.35 0.35	0.04 0.04	10.41 8.92
1996	6.80 6.44	3.45 3.12	0.44 0.44	0.05 0.05	14.23 13.15
1997	5.12 4.82	9.73 3.46	0.49 0.46	0.04 0.04	18.48 17.31
Major revenue sources in 1997 (with % of fund's total revenues)	– Air/water charges (88.2%) – Waste charges (3.3%) – Bank interest (3.0%)	– Air pollution charges (46.1%) – Wastewater charges (21.6%) – Waste charges (13.1%) – Air pollution fines (14.6%) – Wastewater fines (2.0%) – Waste fines (2.7%)	– Air pollution charges (58.0%) – Waste charges (15.6%) – Other charges (14.9%) – Air pollution fines (1.8%) – Water charges (9.7%)	– Pollution charges and fines transferred from the local environmental funds (100%)	– Pollution charges and fines transferred from the regional environmental funds (65.7%) – Loan repayments with interest (5.4%) – Transfers from Far East and Northwest Marine Funds (26.5%)
Major fields of expenditure in 1997 (with % of total environmental expenditures)	– Construction/repair of environmental facilities (71.0%) – Soil (10.1%) – Nature protection (3.7%) – Environmental. authorities (3.4%) – Research (1.8%) – Purchase of instruments & equipment (7.4%)	– Construction/repair of environmental facilities (24.6%) – Research (8.0%) – Nature protection (23.9%) – Program/project development (4.2%) – Education (2.4%) – Protected areas (6.5%) – Environmental authorities (12.3%) – Other (17.6%)	– Regional programmes (40.2%) – Protected areas (6.5%) – Env. authorities (45.7%) – Education (1.1%) – Monitoring (6.4%)	– Nature protection (15.8%) – Education (66.4%) – Monitoring (17.8%)	– Air (5.3%) – Water (13.6%) – Waste (20.4%) – Soil/land (2.1%) – Nature (34.2%) – Education (3.9%) – Monitoring (15.3%) – Research (1.4%) – Other (3.0%)
Primary disbursement mechanisms in 1997 (with % of total disbursements for environmental projects)	– Grants (100%)	– Grants (100%)	– Grants (including barter transactions) (92.8%) – Interest free loans (7.2%)	– Grants (100%)	– Grants (52.6%) – Equity investments (37.3%) – Interest free loans (8.2%) – Soft loans (1.9%)

Sources: Fund surveys appearing in this publication.

Notes: 1) Nominal values based on average annual exchange rates; 2) The survey response from Belarus provided data on revenues and expenditures for the country's *entire environmental fund system*, which also includes local and regional funds. The figures presented here for the Republican Environmental Fund were calculated by the author as a proportion (10%) of total income and expenditures of the entire fund system, and thus must be considered as merely indicative. (Revenues are initially collected by the local authorities, who are required by law to transfer 10% of most revenue types to the Republican Fund.) 3) Expenditures may exceed revenues for a given year because of income carried over from previous years.

Table 4. Key characteristics of selected environmental funds in NIS (Revenues and expenditures in mln USD[1].)

	Russia: National Pollution Abatement Facility	**Russia:** Novgorod Regional Environmental Fund	**Ukraine:** Republican Environmental Fund	**Uzbekistan[2]:** Republican Environmental Fund
Operational in current form since	1995	1990	1992	1993
Total income/expenditure[3]	Income/Expenditure	Income/Expenditure[4]	Income/Expenditure	Income/Expenditure
1993	-	0.23 0.20	1.65 0.33	0.00 0.00
1994	-	0.81 0.47	0.85 0.85	0.03 0.25
1995	59.00 0.13	0.54 0.66	0.26 0.08	0.10 0.10
1996	8.00 0.78	0.71 0.58	1.37 1.48	0.14 0.11
1997	0.09 1.58	0.63 0.67	1.94 1.94	0.08 0.09
Major revenue sources in 1997 (with % of total revenues)	– Loan repayments with interest (100%)	– Air pollution charges (17.3%) – Water pollution charges (48.5%) – Waste disposal charges (29.7%) – Fines for violating hunting and fishing rules (1.6%)	– Pollution charges (94.9%) – Other charges (1.8%) – Pollution fines (1.1%) – Other (2.2%)	– Transfers from the local environmental funds (100%)
Major fields of expenditure in 1997 (with % of total environmental expenditures)	– Air (100%)	– Construction of environmental protection facilities (57.9%) – Research (3.2%) – Monitoring (2.8%) – Nature protection (1.8%) – Education (3.1%) – Environmental authorities (31.0%) – Other (0.3%)	– Nature protection (14.2%) – Reduction of environmental health impacts (32.5%) – Equipment for environmental organisations (25.0%) – Research (4.7%) – International co-operation (4.2%) – Cleanup of accidents (3.3%) – Other (11%)	– Nature protection (8.4%) – Other (91.6%)
Primary disbursement mechanisms in 1997 (with % of total disbursements for environmental projects)	– Soft loans (100%)	– Grants	– Grants (100%)	– Grants (100%)

Sources: Fund surveys appearing in this publication.

Notes: 1) Nominal values based on average annual exchange rates. 2) The survey response from Uzbekistan provided data on revenues and expenditures for the country's *entire environmental fund system*, which also includes local and regional funds. The figures presented here for the Republican Environmental Fund were calculated by the author as proportions (25%) of total income and expenditures of the entire funds system, and thus must be considered as merely indicative. (All revenues are initially collected by the regional funds, which are required by law to transfer 25% of most revenue types to the Republican Fund.) 3) Expenditures may exceed revenues for a given year because of income carried over from previous years. 4) Expenditure figures include pollution charges "offset" in return for agreement by the polluter to use the money for investments in pollution reduction measures (36 % of total environmental expenditures in 1997).