



POLLUTION MANAGEMENT In Focus

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Environmental Funds

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EFs are earmarked financing mechanisms that may support a variety of environmental expenditures.¹ Three main categories of EFs can be distinguished: earmarked tax funds (ETFs), directed credit Funds (DCFs), and green funds (GFs). Some examples of EFs are shown in the Table.

Earmarked Tax Funds

ETFs are created by governments from environmental taxes, charges, and other, mainly environment-related earmarked levies. ETFs are used extensively in transition economies, where they have broad environmental objectives including nature and biodiversity conservation, education and

Environmental funds (EFs) are increasingly popular environmental financing mechanisms in developing and transition economies. The failure of governments to tackle environmental problems by putting in place incentive policies, environmental regulations and enforcement mechanisms, as well as failures of the financial and capital markets to provide access to financing at reasonable terms are typically the underlying reasons why special environmental financing mechanisms are established. EFs, however, often only postpone rather than solve these problems, and they may contribute to existing distortions. This note provides guidance on approaches to dealing with EFs.

awareness building, research and institution building, and public and private pollution abatement. Both public and commercial financing functions are mixed in ETFs, which typically provide grants and soft loans. ETFs are usually set up as *extrabudgetary funds* functioning as part of the Environment Ministry or strongly influenced by it. EFs are often susceptible to political influence, lack transparency, and the participation of main stakeholders in decisionmaking.

Directed Credit Funds

DCFs may be established as financial intermediaries by either donor organizations—such as the World Bank—or national governments. They are de-

signed to finance small commercial or municipal pollution abatement projects by avoiding the cost of direct financing.² DCFs typically operate on a revolving basis, often for a predetermined period corresponding, for example, to the disbursement period of donor lending. They are *commercial institutions* with strong development goals aimed at correcting certain market, administrative, and regulatory failures. Donor lending is sometimes supplemented by the recipient government or other sources in order to soften on lending terms through grant elements, technical assistance, or better-than-market interest rates. Experience has shown that DCFs have been rarely effective in achieving sig-

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nificant environmental improvements, and they often struggled with the lack of demand for credit and difficulties in separating their financial and environmental objectives.

Green Funds

GFs are typically capitalized at the initiative of donors through one-time *contributions* or debt-for-nature swaps.³ GFs finance nature and biodiversity protection, most often by providing grants to cover the operating costs of national parks and small community-based programs. Many GFs have successfully pooled revenues from various donor sources. The willingness of donors to contribute to GFs in developing countries is driven by the environmental benefits of investments in nature conservation that accrue across national boundaries. In some cases, domestic sources, such as royalties and ecotourism revenues, also accrue to the fund. A popular form of GFs is trust funds that utilize only earned revenues from the fund, leaving the principal intact. GFs usually require transparency in spending and decisionmaking and the participation of the main stakeholders such as NGOs and community groups.

Conceptual Issues

EFs are established to solve the problem of insufficient funding for environmental projects. Although dysfunctional and under-developed financial and capital markets, unsolved collateral issues, high transaction costs, and insufficient information often limit access to financing in developing and transition economies, such constraints are not unique to environmental investments. The key constraints of environ-

mental investments are typically on the *demand side* due to:

- *The failure of governments* to tackle environmental problems by putting into place proper incentive policies, environmental regulations and enforcement;
- *Low political priority* attached to environment in government budgeting;
- *Uncertainties* about environmental regulations and the low perceived likelihood of serious penalties for violating regulations;
- *Limited knowledge and expertise* available to municipalities, local groups, and enterprises for identifying solutions to environmental problems, use alternative funding sources, and prepare projects for financing;
- *Sluggish response* of polluters to incentives as a result of the dominance of public sector; and
- *Slow change* in traditional enterprise decision making, capital budgeting, and accounting practices that traditionally exclude environmental considerations.

Key Lessons from Experience

Raising awareness of environmental problems has been one of the main benefits of EFs. Donors have used their financial leverage successfully during the establishment of several GFs, for example, by requiring matching funds and government commitment to policy reform. ETFs have facilitated the introduction of environmental taxes, establishing the framework for incentive environmental policies and raising enterprise awareness of environmental costs.

EFs are generally better suited to addressing “green” issues (nature and biodiversity protection) than to “brown” (pollution abatement). The

use of public funds to finance environmental expenditures is justified when benefits cannot be allocated to private economic agents, or where public financing is more efficient than private. Most green environmental expenditures fall into this category due to their global and trans-generational benefits. By contrast, pollution, however, is a negative externality that can be tackled most effectively by making polluters pay the social costs of pollution. The use of public funds to support pollution abatement should, therefore, be temporary should be targeted to areas where they can speed up the pace of environmental improvements and help with the adjustment to the changing environmental regulations.

Because of the fundamental differences between the various categories of EFs, they do not mix easily. For example, donors do not consider most ETFs suitable channels for their financial resources. The World Bank has capitalized new DCFs in several countries (e.g., China and Russia) despite existing ETFs. The many reasons for such incompatibility, including: conceptual problems in using earmarked tax revenues for primarily commercial lending; lack of financial and banking expertise in ETFs; a too broadly defined mandates of most ETFs; lack of transparency and accountability in the operation of ETFs; and limited willingness of ETFs to accommodate donor requirements.

Financing through EFs will be effective only if the underlying reasons for the environmental problems are simultaneously tackled at the policy level. Most environmental problems are the results of regulatory and market failures such as price subsidies for energy and fertilizers, underpriced natural resources, undefined property

rights, and the failure of environmental regulations and enforcement to penalize environmental damage and change polluter behavior. Without policy reform to accompany the use of EFs, environmental problems recreate themselves, and EFs just postpone the work of finding real solutions.

Without strengthened environmental regulations and enforcement, EFs send the wrong messages and contribute to existing distortions. Subsidies for remedying environmental problems and providing public environmental services may reward and attract environmentally damaging practices; cause environmental improvements to be postponed in expectation of support; and crowd out commercial financing. Only a carrot-and-stick approach that rewards improved practices and strengthens environmental policies, regulation and enforcement can ensure the positive role of EFs.

EFs can be made more effective if it strengthens the self-financing capacity of beneficiaries and tackles the causes of financial constraints. EFs should therefore focus on eliminating such constraints as lack of information about alternative ways to achieve environmental improvements, limited access to commercial financing, and lack of cost recovery.

Without a clear spending strategy and eligibility and project selection criteria based on cost-effective solutions to environmental priorities, the allocation of financial resources becomes sub-optimal and wasteful. EFs, therefore, should have links to the environmental policymaking body to obtain guidance for spending priorities, and set their spending criteria accordingly.

Transparency and accountability in the operation of EFs are essential for avoiding ad-hoc political influence and

mismanagement of public funds.

Mechanisms for the participation of the main stakeholders in the decisionmaking of EFs not only contribute to the transparency of the fund operations but also build local capacity to identify and implement environmental projects. Capacity building has been especially strongly emphasized and successfully carried out by GFs.

Recommended Checklist for World Bank Projects

When a government suggests using Bank resources to support or set up an EF, the following checklist can be used to guide your discussions:

Policy Issues

- Examine/identify the *environmental priorities* of the country.
- Identify steps and measurable indicators of strengthened *environmental policies*.

Design Issues

- Evaluate the pros and cons of *direct versus intermediary lending*.
- If intermediary lending is justified because of the high transaction cost of reaching a large number of small borrowers, assess the available *choices of intermediaries*: the banking sector, an existing EF, or a new EF. The default should be to onlend through the banking sector rather than establishing new institutions or EFs.
- For EFs designed to address pollution abatement, establish a schedule for *phasing out the EF* tied to monitorable improvements in environmental regulations and enforcement.
- Onlending is best introduced on a *pilot basis*, and a thorough economic analysis of impacts on

environmental quality should be carried out after the initial phase of operation.

Onlending Criteria

- Define clear *criteria for project selection* based on environmental priorities.
- Instead of softening the financing conditions of onlending, give preference to assistance in *eliminating the main constraints* on financing. Possible areas for support include financing environmental audits to identify low-cost solutions to environmental problems and alternatives for improving environmental performance; providing technical assistance in *appraising and preparing* loan applications for environmental projects; and disseminating information about available technologies and best practices.
- If softening the final credit terms of sub-projects becomes necessary to target existing pollution sources, *credit-plus-grant* schemes are usually preferable to subsidized interest rates because of transparency.
- *Financial performance indicators* should be at least as strict as indicators used in commercial lending.
- *Eligibility for grants* has to be linked to non-internalized environmental benefits expected from sub-projects.
- Clear and *measurable environmental performance indicators* have to be agreed, and grants should be converted to credit at market terms if a borrower does not comply with these indicators.
- Grant allocation should be *transparent*, and the people and institution in charge of the grant facility should be held accountable for the proper handling of funds. The participation of NGOs or community groups in the design of the program and in the monitoring of implementation is highly desirable.

Table — Examples of Environmental Funds

	Revenues	Main Expenditures	Beneficiaries	Disbursement
<i>Earmarked Tax Funds</i>				
Hungary CEPF	Fuel tax, product charges, traffic transit fee, pollution fines, EU PHARE grant	Air pollution abatement, waste management, water pollution control, public awareness building	Public transportation companies, municipalities, industrial enterprises, research institutes	Grants, low-interest loans
Poland NFEPWM	Air and water pollution charges, water use and waste charges	Air and water pollution abatement, soil protection, environmental monitoring and education	Industrial enterprises, municipal companies, universities	Soft loans, loan guarantees, grants
Russia FEF	Pollution charges, fines	Pollution control, environmental R&D, institution building	Municipal companies, industrial enterprise, research institutes	Grants
<i>Directed Credit Funds</i>				
China Tianjin IPCF	IDA credit, pollution charges	Waste reduction and recovery, pollution prevention (cleaner technology)	Industrial enterprises	Market-rate loans plus grant (10-30%)
Russia PAF	IBRD loan	Waste recovery.	Public and private industrial enterprises	IBRD rate plus 400 BPs
Slovenia Eco-Fund	Budget allocation, IBRD loan	Urban pollution abatement	Households, cooperatives, commercial and industrial enterprises, municipalities	LIBOR plus 200 BPs
<i>Green Funds</i>				
Bolivia FONAMA	DNSs by international NGOs, foreign government contributions	Support to protected areas in nature conservation	Local communities, NGOs	Grants
Colombia ECOFONDO	DNSs, NGOs, foreign governments	Nature protection, environmental education, integrated watershed management	NGOs, local groups	Grants

Note: BP: basis points; CEPF: Central Environmental Protection Fund; FEF: Federal Environmental Fund; IPCF: Industrial Pollution Control Fund; LIBOR: London interbank rate; NFEPWM: National Fund for Environmental Protection and Water Management; PAF: Pollution Abatement Facility.

To be Avoided

- Setting up an onlending program with soft credit terms for pollution abatement when significant improvement in environmental regulations and enforcement cannot be expected; or enterprise management is nonresponsive.
- Financing pollution abatement projects at soft terms without clear objectives for environmental quality improvements and strong links of subproject financing to these improvements.

Endnotes

1. The term "environmental fund" is also used to denote *investment funds* that specialize in environmentally friendly industries and services. This note does not deal with this type of funds.

2. In a broader sense, *social funds* also belong to this category insofar as they finance basic environmental services such as waste disposal and sanitation. Although social funds often have environment related expenditures, their primary objectives are to alleviate poverty and provide a social safety net targeting the poor.
3. Debt for nature swaps are debt-conversion programs in which either an international NGO purchases commercial debt of a developing country on the secondary market at a discount, or official debt is forgiven by lender Governments in exchange for the debtor country's commitment to spend an equal or agreed amount on nature protection. Commercial debt-for-nature swaps typically establish GFs, while EFs created by official DNSs (for example, in Poland and Bulgaria) have broader environmental objectives.

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