

Environmental trends in transition economies

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Introduction

The collapse of communism in Central and Eastern Europe and the subsequent disintegration of the Soviet Union brought the region's serious environmental problems to the attention of the international community. Although the countries in this vast area of the world are remarkably diverse, central economic planning had created a common pattern of environmental problems. Notable among these problems were levels of industrial pollution that, in many places, threatened human health; widespread land and water degradation (particularly in the former Soviet Union); and the persistent neglect of nuclear safety and nuclear waste management.

Faced with this situation, and convinced that the integration of environmental and economic reform was the key to progress, environment ministers from OECD countries and countries in the region came together in April 1993 to adopt an [Environmental Action Programme for Central and Eastern Europe \(EAP\)](#).

This *Policy Brief* is based on an OECD study published under the title [Environment in the Transition to a Market Economy; Progress in Central and Eastern Europe and the New Independent States](#). The study examines the implementation of the EAP in order to derive some lessons from the experience. Specifically, it reviews the interaction between the economic transition and environmental conditions; the development of institutions and policies for environmental protection; and the role the general public, non-governmental organisations (NGOs) and the enterprise sector have played in policy development. It also examines international co-operation, which has played a crucial role in supporting environmental protection efforts in many of the countries of Central and Eastern Europe and the former Soviet Union (referred to below as the CEEC and NIS). ■

What did the EAP recommend?

Underlying the EAP is the conviction that economic reform can generate efficiency gains that will reduce industrial pollution and other pressures on the environment. Countries in the region need to build on these gains by developing effective environmental policies. The EAP recommended that such policies set priorities based on good analysis and public participation; tackle priority problems with an appropriate mix of policy, institutional measures and investment; and apply the principle of cost-effectiveness to the allocation of scarce resources.

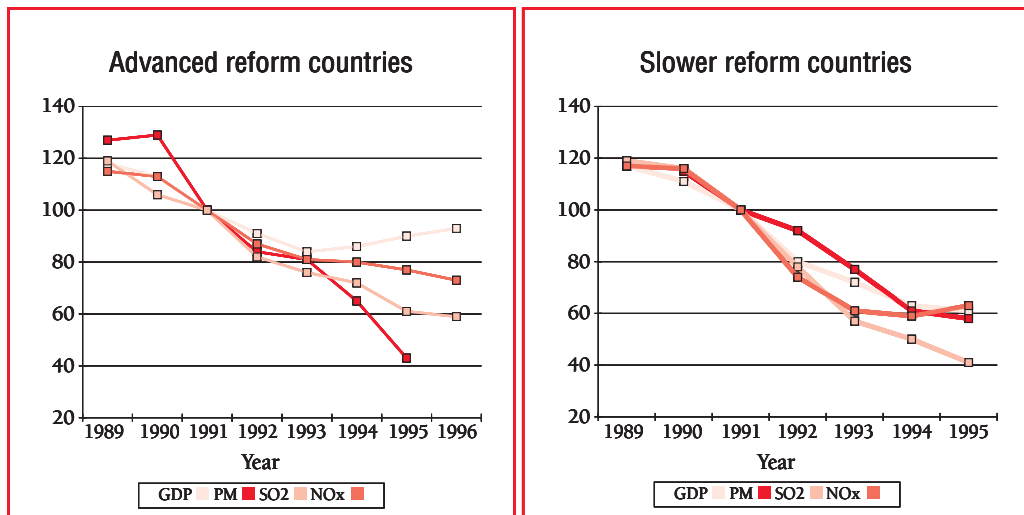
The EAP urged governments and other actors in the region to pursue policies and projects that lead to both economic returns and environmental improvement. To achieve effective and lasting environmental improvement, CEEC and NIS governments and others would need to combine policy reforms with institutional strengthening and cost-effective investments.

The EAP recommended that the CEEC and NIS set environmental priorities by developing National Environmental Action Programmes and other, complementary, environmental policy strategies. It suggested that they focus in particular on local problems, tackling first the most

serious pollution threats to human health. The EAP recommended that governments, with the participation of interest groups and experts, employ analytical methods, including health risk analysis and cost-effectiveness analysis, to identify priority issues and responses.

The EAP distilled environmental policy lessons from both OECD countries and the CEEC and NIS. For example, it urged reliance on market-based instruments, such as pollution charges and emissions trading mechanisms – coupled, when appropriate, with other policy instruments – to achieve the most cost-effective reductions in pollution. ■

Air pollution emissions and GDP, 1989 to 1996



Unweighted averages
Sources: OECD and national data

Does economic reform improve environmental conditions?

A central principle of the EAP was that the process of economic reform and restructuring would eliminate

the perverse incentives that had generated many of the environmental problems of centrally planned economies. However, it recognised that economic reform alone is not a solution. Effective environmental policies, institutions and investments are required to harness the positive

forces of market reform and ensure that enterprises and other economic actors improve their environmental performance. This, in turn, requires economic stability and the prospect of sustained economic growth to encourage governments and industrial enterprises to take the steps

needed to make more efficient use of energy and natural resources, mitigate pollution, and enhance the positive environmental effects generated by economic reform. Indeed, it is unrealistic to expect any substantial progress towards better environmental performance or, specifically, an increase in environmental investments until the core elements of macroeconomic stability are in place.

In the event, what occurred? In the more advanced economies of the region, economic reforms have helped generate resources for investment in cleaner, more efficient technologies; reduced the share of pollution-intensive heavy industries in economic activity; and helped curb pollution and waste generation as part of the shift towards more efficient production methods. In these countries, economic restructuring and environmental actions appear to have played an important role in reducing air pollution: average trends in emissions of particulate matter fell faster than GDP as economies contracted and continued to fall, even after GDP levels started to grow. Several advanced reform countries have seen similar reductions in water pollution. In some sectors, however, the transition has brought greater environmental pressures. For example, in those countries returning to economic growth, the use of motor vehicles for both passenger and freight transport has increased rapidly.

In the slower reform countries, falling output, rather than economic restructuring or environmental protection efforts, appears to have been the main factor behind the decrease of emissions of pollutants. If these countries were to return to growth without further economic reforms and implementation of environmen-

tal policies, their air pollution emissions could increase accordingly. Overall in these countries, the slow pace of economic reform and the ongoing economic crisis have impeded environmental improvement, and pollution levels and resource consumption have declined less than output.

Although the advanced reform countries have made some progress, many environmental problems remain to be addressed, even in the most successful of them. The pollution and resource intensities of their economies, and of most sectors, are still several times higher than in OECD countries. Depending on the pace of restructuring, it may take the countries wishing to accede to the European Union 20 years or more to meet all current EU environmental requirements. Prospects in the NIS are even more daunting. Throughout the region, there is growing recognition that the often-rapid pace of liberalisation and privatisation has not been matched by the development of institutions necessary to support a well-functioning market economy. ■

Why is institutional reform essential?

Economic reform is a necessary condition for environmental improvement, but it is not sufficient. The development of a new range of environmental policies and institutions, adapted to democratic, market-based societies, has also been essential to improve the environmental performance of transition economies. By the late 1980s, most Central and Eastern European countries had created central environmental authorities, as had the former Soviet Union. However, these authorities were limited to a co-ordinating role,

as many responsibilities for environmental protection remained dispersed among sectoral agencies. As a result, they generally had low institutional capacities, small budgets and little influence.

Progress has been conditioned by the broader challenge of establishing effective systems of governance at national and sub-national levels. Poor governance has been a crucial problem for the transition in the NIS. In contrast, some CEEC have made serious efforts to strengthen the administrative and technical capacities of their national environmental institutions. For many Central and Eastern European environment ministries, however, the pace has slowed in recent years as the environment has been eclipsed by other political priorities.

In many countries, the development of the capacities of environmental institutions and the introduction of new policy instruments required for more effective environmental management have been important achievements. Nevertheless, there is a need to reform management systems involving excessive discretion and arbitrary decision-making by public officials, as they perpetuate “administered” economic relations and encourage corruption. Decentralisation has proved an effective means to strengthen environmental management by bringing it closer to the public and to local concerns, and thereby increasing accountability, transparency and participation. One important problem in countries throughout the region is that national governments have decentralised many powers and responsibilities but withheld the right to raise revenues. Although many advanced reform countries have strengthened their environmental policies, most face a difficult policy

challenge in terms of improving integration with sectoral policies, in particular in areas such as transport.

Several trends and lessons regarding policy development have emerged from the CEEC and NIS experience. Most importantly, successful policy development has incorporated four key elements: priority setting; broad participation; cost-effective and financially feasible implementation; and monitoring. ■

How are NGOs and the general public involved?

Before their former regimes crumbled, the environment was the first “open” issue for political activity in many CEEC and the NIS. The 1986 Chernobyl disaster catalysed environmental movements in many countries. However, in the early 1990s, public concern and political attention to environmental issues decreased as the economic problems of transition grew in importance. Today environment is only weakly established in party political systems and parliaments. Despite this, environment ministries have recorded important achievements. They were often among the first to reform policies and to attract external support. However, from an overall transition perspective, arguably their most significant contribution has been to support the emergence of civil society by promoting more open, participatory decision-making.

In some CEEC and a few NIS, environmentally oriented NGOs are constructively influencing environmental policy development; in others, their presence and impact are limited. Some NGOs are providing key services for national environmental

movements, such as legal advice and assistance. Others have taken on important roles in the policy process by organising referenda, participating in government and parliamentary discussions on environmental policy, working with local communities, and helping implement environmental projects. Some national NGOs, particularly in CEEC, have focused on specific issues such as transport and environment and have built national and international NGO networks to push for policy changes. Local NGOs predominate in many CEEC and NIS. Typically they are small groups with little funding, but they are close to the public at large. To be effective in the longer term, these NGOs will need to build a stronger base of public support.

Public awareness of environmental problems, public pressure to solve them, and public participation in decision-making are essential for the development and implementation of effective environmental policies. Nearly all CEEC and NIS have laws that, at least in principle, guarantee public access to environmental information held by the government. Several Central and Eastern European governments have recently adopted laws based on the European Union directive on environmental information. Some of the approaches developed have matched or surpassed those in Western European countries. ■

What are the key environmental policy instruments?

Countries in the region have used a mix of policy instruments for pollution management, in which standards for the maximum concentrations of a

pollutant in a specific medium, such as air, water or soil (ambient standards), facility environmental permits and pollution charges have all played prominent roles. Although these systems are complex and difficult to administer, they have contributed to pollution reduction in several advanced countries.

The revenues raised by levying pollution charges and fines have been used to finance pollution control projects. In a number of countries, particularly among the NIS, inflation has eroded the level of pollution charges, reducing both their value as an incentive and the revenue they raise. In addition to restoring pollution charges to appropriate levels where necessary, countries in the region can strengthen their pollution management systems by streamlining and better targeting, and by introducing new economic instruments, such as charges on the pollution content of fuels.

Since 1989, nearly all CEEC have adopted environmental impact assessment procedures, but their scope varies significantly. A number of CEEC have also established strategic environmental impact assessments to review sectoral policies and land-use plans.

Effective environmental information systems are vital for environmental management, including the design and implementation of policy measures. Most CEEC have created national institutions and networks to bring together data from different monitoring networks and to share, analyse and disseminate it. Both CEEC and NIS have improved the integration of national information systems with international networks. ■

National pollution abatement and control investment per capita and as a share of GDP, 1996^a

	Per capita (US\$) ^b	% of GDP
Case study countries		
Georgia
Hungary	57	0.6
Lithuania	33	0.6
Poland	72	1.1
Russia	24	0.4
Slovenia	48	0.4
Western European countries		
Germany ^c	111	0.5
Portugal	50	0.4

a. Data for Poland and Germany refer to 1995, data for Portugal to 1994.

b. Calculated using purchasing power parities.

c. Western Germany only

.. = Not available

How are environmental investments financed?

Throughout the region, policies and institutions require further strengthening in order to mobilise and channel domestic resources for priority investments.

Macroeconomic imbalances and weak financial institutions have constrained the supply of affordable capital for investments by enterprises and public institutions throughout the region, though this is now changing in the advanced reform countries. Nonetheless, environmental investments in the advanced reform countries, as a percentage of GDP, compare favourably with those in OECD countries. Environmental funds and policy reforms that have prompted enterprise demand for environmental investments have been important factors.

According to the Polluter Pays Principle, enterprises should use their own resources – and raise their own financing – for investments to meet

environmental policy requirements. Implementing the Principle has been an important policy goal for many countries in the region but has proved difficult to achieve, in particular where enterprises face economic crisis and macroeconomic conditions are unstable. In response, many governments have tried to strengthen the supply side of environmental financing by using environmental funds and other instruments. Nearly all countries in the region have at least one national environmental fund, and a few two or more. There are also a number of regional and local funds. Environmental funds account for about 35% of estimated finance in Poland; about 25% in Hungary and Lithuania; and 5% in Russia. Environmental funds generally fall into two groups: those capitalised by domestic revenues generated principally from environmental fees and fines or product charges; and those established and capitalised by donor grants or international financial institution loans. In most CEEC and NIS, government environmental

funds have provided limited support to manufacturing enterprises. Most funds have focused on infrastructure projects, such as municipally owned waste water treatment plants, or projects in the power sector.

Government environmental financing programmes, as well as user charges, have been crucial in helping finance municipal infrastructure and services in OECD countries and some CEEC and NIS. Ideally, revenue from user fees should provide the bulk of financing for municipal environmental infrastructure. As infrastructure investments involve high initial costs, these must usually be financed by loans, bond issues or other sources. During the transition, municipalities have faced difficulties in putting such mechanisms into practice: obtaining financing for investment in a context of high interest rates; and the difficulty of many users (especially households) to pay the fees necessary to cover debt repayments.

New and creative approaches will be needed to finance municipal serv-

ices. Some approaches, such as issuing municipal bonds, are already being tried in advanced transition countries. Others, such as public-private partnerships, have been little used in the region so far.

Harnessing foreign direct investment (FDI) and other private flows more effectively for environmental purposes is a key challenge for countries in the region. Private capital flows, including international loans and equity investments, to developing and transition countries have expanded rapidly over the past decade. FDI, has grown rapidly in the CEEC and NIS in recent years, reaching US\$ 17 billion in 1997, a sum about 50 per cent greater than the official assistance and finance these countries received. FDI is concentrated in a few countries: the Czech Republic, Hungary, Poland, Russia, and oil-rich countries, in particular Kazakhstan.

The interaction between FDI and the environment is a complex topic of ongoing policy debate. In advanced reform countries, there has been a strong flow of FDI to the industrial sector. There, many large foreign investors have introduced stronger environmental management and made investments that have reduced pollution. In the NIS, much FDI has gone to natural resource extraction. Oil and gas extraction, forestry, and other natural resource activities have extensive impacts on natural environments; while some projects paid attention to environmental issues, ongoing monitoring of this sector is needed. ■

What is the role of the enterprise sector?

Enterprises in advanced reform countries have invested in less polluting

production methods and in pollution control equipment. Some have started to implement environmental management. Still, enterprises in the region have made less progress than expected in integrating environmental objectives into management goals and methods. In many slower reform countries, weak incentives for environmental improvement, combined with the ongoing economic crisis, have provided little stimulus for environmental action by enterprises. Much more needs to be done in most countries to establish a basis for effective environmental management in enterprises.

Under central planning, industry generated high pollution levels. Enterprise management often paid little attention to economic efficiency. In many enterprises plant maintenance was neglected. Three main forces have encouraged industrial enterprises to seek greater efficiencies and, on a national level, have changed industrial structures: the creation of competitive markets, the development of government institutions and laws to support them, and the development of effective corporate governance.

Although a large share of the industrial base across the region has been privatised, in many countries effective structures for corporate governance have not yet emerged. One area of vital importance is the development of “hard budget constraints” for enterprises, including the threat of bankruptcy for those that are not viable. Many countries have been slow to apply these and other mechanisms to restructure heavy industry. This has delayed the closure of old plants as well as investment in new, less polluting production methods. In some NIS, industrial enterprises have had few incentives to improve their production efficiencies. The

age of capital equipment has continued to lengthen and its maintenance to worsen, exacerbating pollution levels. Government tolerance in the NIS of payment arrears and barter trade has blunted incentives to improve energy efficiency or minimise waste generation.

The process of restructuring and modernising large industrial enterprises can be long and costly. Iron and steel, a key industry in the centrally planned economies, was characterised by ageing mills using inefficient production practices and old, highly polluting technologies such as open hearth furnaces. In contrast, steel producers in OECD countries have steadily improved the efficiency of their production methods; 40 per cent of OECD steel production is now based on recycled scrap metal. In the NIS, in particular, both governments and assistance programmes could take a greater role in disseminating so-called “clean production” methods to enterprises interested in restructuring and modernisation. ■

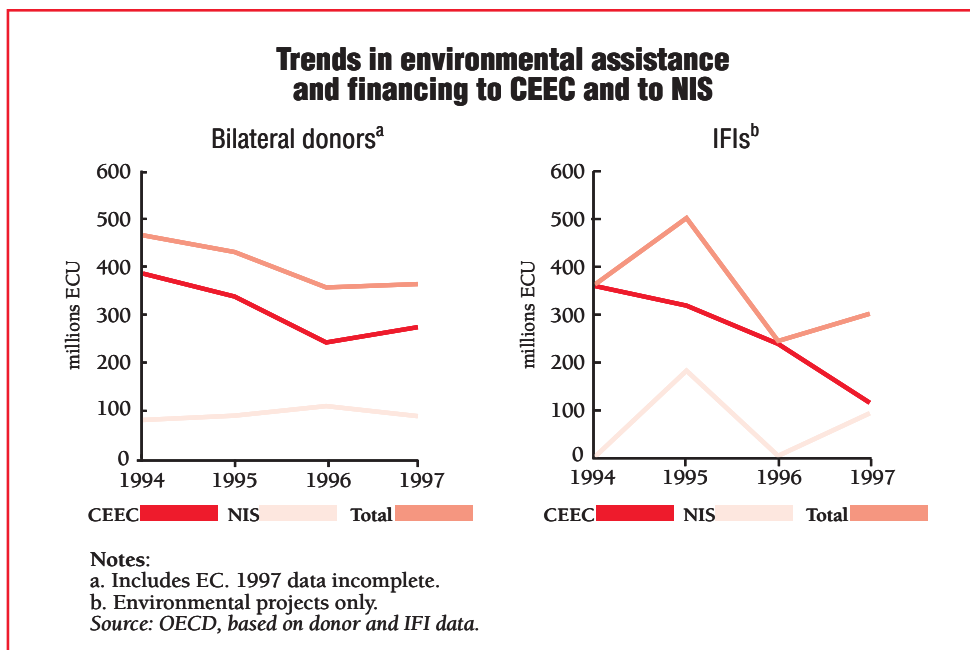
What about international co-operation?

From the beginning of the transition, OECD countries and international organisations have extended technical assistance to strengthen CEEC and NIS institutions and policies, and provided financing for investments in infrastructure and other areas. Total official assistance - mainly grants - across all fields reached a peak of US\$ 9.7 billion in 1995. Assistance and financing for the environment has represented a significant portion - probably over 10 per cent - of this total.

After peaking in 1994, international flows of environmental assistance and finance have fallen slightly. To

some extent, the decrease in environmental loans from the International Financial Institutions (IFIs)

has been offset by better integration of environmental considerations into non-environmental projects.



Most assistance and financing have gone to CEEC, both in absolute terms and even more on a per capita basis. Five countries received about half of all technical assistance and investment finance (Czech Republic, Hungary, Poland, Romania and Russia). The three Baltic states, Estonia, Latvia and Lithuania, have received the most per capita assistance and finance. External assistance generally accounts for less than 10 per cent of environmental finance, except in the very poorest countries where it is often the most important source.

Over the course of the transition, many donors, IFIs and recipient countries have worked to improve the effectiveness of co-operation efforts. Binding agreements, such as multilateral conventions and treaties, have been an important element of environmental co-operation in Europe. Experience over the transition has shown that donor support works well when programmes seek

to establish long-term relationships with recipient countries, and when the programme responds to country requests. In general, the countries in the region that have managed to implement reform have also been the most successful in attracting and using international assistance and financing. ■

What about the future?

Progress in 10 of the CEEC has enabled them to begin the process of accession to the EU. This will transform the approach to environmental issues in these countries and greatly increase the level of assistance and financing available to them. In contrast, the NIS have encountered much greater difficulty in the transition to democracy and market-based economies, and there is no driver equivalent to the EU accession process available to them. Given that differences in the per capita income levels of the two groups have increased, and

that implementation of EAP-related policy initiatives has become more difficult in the NIS in the wake of the 1998 economic and financial crisis, a deepening and strengthening of international co-operation with these countries is now a pressing priority.

All countries in the region would benefit from a deepening of economic reform, together with a strengthening of environmental policy frameworks and institutional capacities. In the future, the EAP's primary focus on pollution issues should be broadened to include sustainable management of natural resources. Progress toward sustainable development also requires better integration of social concerns with economic and environmental policies. Finally, a deepening of the solidarity and co-operation that have characterised the EAP process will be essential in order to assure the continuation of valuable and necessary support to the transition economies. ■

Further reading

- **National Climate Policies and the Kyoto Protocol**, *forthcoming*, ISBN 92-64-17114-2, US\$21, 66p.
- **Environmental Performance Reviews: Russian Federation**, *forthcoming* ISBN 92-64-17145-2, US\$N/A, 150p.
- **Environmental Performance Reviews: Hungary**, *forthcoming*
- **Environment in the Transition to a market economy: Progress in Central and Eastern Europe and the New Independent States**, 1999 ISBN 92-64-17110-X, US\$62, 277p.
- **Internet site:**
 - Environmental Action Task Force for Central and Eastern Europe: www.oecd.org/env/eap/
 - Centre for Co-operation with non-Members: www.oecd.org/sge/ccnm/
- **Foreign Direct Investment and the Environment**, 1999, ISBN 92-64-17127-4, US\$29, 136 p.
- **Environmental Taxes: Recent Developments in China and OECD Countries**, 1999 ISBN 92-64-17092-8, US\$64, 328 p.
- **Handbook of Incentive Measures for Biodiversity: Design and Implementation**, 1999 ISBN 92-64-17059-6, US\$32, 176 p.
- **The Price of Water: Trends in OECD Countries**, 1999, ISBN 92-64-17079-0, US\$29, 174 p.
- **Environmental Performance Reviews: Czech Republic**, 1999, ISBN 92-64-17009-X, US\$35, 204p.
- **OECD Proceedings: Environmental Financing in the Russian Federation**, 1998, ISBN 92-64-16092-2, US\$13, 116 p.
- **Environmental Performance Reviews: Belarus**, 1997, ISBN 92-64-15626-7, US\$35, 139 p.
- **Environmental Funds in Economies in Transition**, 1996, ISBN 92-64-14653-9, US\$26, 126 p.
- **Environmental Performance Reviews: Bulgaria**, 1996, ISBN 92-64-14797-7, US\$35, 166 p
- **Environmental Performance Reviews: Poland**, 1995, ISBN 92-64-14349-1, US\$35, 186 p.
- **Cleaner Production Centres in Central and Eastern Europe and the New Independent States**, 1999 Free on Internet: www.oecd.org/env/docs/en/ccnmenveap9925.pdf
- **Environmental Information Systems in the Russian Federation: an OECD Assessment**, 1996 Free on Internet: www.oecd.org/env/docs/en/gd9666.pdf
- **"St.Petersburg Guidelines" on environmental funds in the transition to a market economy**, 1995 Free on Internet: www.oecd.org/env/docs/en/gd95108.pdf
- **Environmental Indicators: A Review of Selected Central and Eastern European Countries, 1996** Free on Internet: www.oecd.org/sge/ccnm/pubs/gd/cd156201/present.htm
- **The Global Environmental Goods and Services Industry**. Free on Internet www.oecd.org/dsti/sti/industry/indcomp/prod/envblur.htm
- **The Environmental Goods and Services Industry: Manual for Data Collection and Analysis** ISBN 92-64-17109-6, US\$21, 68p.

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