

The Environmental Challenge of EU Enlargement in Central and Eastern Europe

THEMATIC REPORT

2001



.....



DANCEE

Danish Cooperation for Environment in Eastern Europe
Ministry of the Environment

**Publisher**

Ministry of the Environment,
Danish Environmental Protection Agency,
Strandgade 29, DK-1401 Copenhagen
Telephone int +45 32 66 01 00
Telefax int +45 32 66 04 79
Internet: <http://www.mst.dk>

Year of publication 2001

Title

The Environmental Challenge of EU Enlargement in
Central and Eastern Europe

Text

This report has been prepared for the Danish
Ministry of the Environment by Milieu Idt.,
Environmental Law Consultancy. However, the report
does not necessarily reflect the views of Danish
Ministry of the Environment

Editors

Dinne S. Hansen (DANCEE)
Michael Rasmussen (DANCEE)

Concept

Valør & Tinge A/S

Abstract

The thematic report describes the environmental
challenges related to the ongoing and future
enlargement of EU. The state of the environment
and related economic gaps in the sectors are
presented for each applicant country. Economic
aspects before and after the enlargement are
presented and political issues are highlighted.

Terms

Environment, CEE, DANCEE, Central and Eastern
Europe, EU, Enlargement

Edition closed December 2001

Number of pages 60

Format A4

Number of copies 1000

Electronic www.mst.dk/dancee (pdf+HTML)

Graphic concept Linneballe Designers as

Printed by Phønix-Trykkeriet A/S

Paper 130g. Cyclys Print/ 300g. Zanders Mega Matt

Price Free

Photos Lars Hansen/ BAM, Niels Riis/Kampsax A/S,
Heine Pedersen/BAM, Mikkel
Østergaard/BAM, CIK, Gerd Ludwig,
Polfoto, Agnieszka Rendemann,
Miljøstyrelsen, Søren Svendsen/BAM, Erik
Kragh/BAM, Steen Larsen/BAM, Finn
Frandsen/Polfoto, Lars Bahl/BAM, Thomas
Boberg/Polfoto, Claus Bonnerup/Polfoto,
Ilmars Znotis/Scanpix, Dimitad Deinov,
Scanpix, Leif Poulsen, Scanpix.

ISBN 87-7944-891-7



The printed matter is approved under the Nordic
environmental label. Identity number 541 006.
This ensures that the printed matter meets the
official environmental requirements during its life
cycle. Printed on official environmentally approved
paper with vegetable-based printing inks.

The Environmental Challenge of EU Enlargement in Central and Eastern Europe



DANCEE

Danish Cooperation for Environment in Eastern Europe
Ministry of the Environment



CONTENT

CHAPTER 1	Introduction	4
CHAPTER 2	The Process of Enlargement	6
CHAPTER 3	Enlargement Negotiations and the Environment Chapter	8
CHAPTER 4	The Environmental Issues at Stake in the Enlargement	14
	4.1 Water Quality and Water Pollution Control	
	4.2 Air Quality	
	4.3 Waste Management	
	4.4 Industrial Pollution	
	4.5 Nuclear Safety	
	4.6 Chemical Control	
	4.7 Agriculture and Environment	
	4.8 Nature Conservation and Forests	
	4.9 Horizontal Legislation	
	4.10 International Environmental Conventions	
	4.11 Sector Integration	
CHAPTER 5	The Economic Implications of the Enlargement for the Environment Sector	37
CHAPTER 6	The Sources of Environmental Financing Before and after Accession	41
CHAPTER 7	The Policy Dilemmas	50
	Abbreviations	53
	Notes	55

CHAPTER 1

INTRODUCTION

Since the 1997 report from the Danish Environmental Protection Agency (DEPA) on the environmental perspectives of EU enlargement⁽¹⁾, the pre-accession process has accelerated. There are now twelve EU applicant countries – ten from Central and Eastern Europe (Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) and two Mediterranean countries (Cyprus and Malta). In addition, Turkey's application for EU membership has been accepted.

It is still uncertain when the first new members will be able to join or how many countries will be part of the next "wave". The earliest date for the next enlargement now being mentioned is the beginning of 2004⁽²⁾.

One of the questions viewed as important in the enlargement debate is whether the enlargement of the EU and the threshold requirement to approximate to EU standards will raise the level of environmental protection for Europe and the consequent implications for citizens of EU Member States such as Denmark.

The answer to the question posed above is a qualified yes. The efforts to achieve higher levels of environmental protection to date by all of the CEE countries are paying off. Central Europe's notoriously polluted "black triangle" – the region where the territories of Poland, the Czech Republic and eastern Germany meet – has achieved massive cuts in polluting emissions since 1989⁽³⁾. Though some of the CEE applicant countries are further along than others in bringing their legal and administrative frameworks into compliance with EU environmental requirements, all have significantly improved their capacity for environmental management.

On the other hand, these short-term gains may need to be weighed against the long-term perspective. An enlarged European Union with 25 Member States (the current 15 plus the 10 applicant countries considered most likely to be ready in the short term) will have a very different dynamic. There is some concern that the enlargement might mean a slow-down in the shaping of environmental policy and law at EU level.

The drive to comply with EU standards which has brought about such environmental gains in the CEE applicant countries, has not been present in the former Soviet Union countries known collectively as the CIS ("Commonwealth of Independent States"). While some individual improvements in environmental management have been achieved, most pollution reductions have been linked to closure of industrial plants due to economic decline. In the meantime, the public budgets of most of the CIS are shrinking, and much of the region's basic environmental infrastructure, e.g. water supply systems, is crumbling from lack of maintenance.

Today, at EU level, political pressure is building to close enlargement negotiations with the more politically and economically advanced CEE applicant countries. So far, the institutions of the European Union have taken a strong position on the importance of approximation with the extensive EU environmental requirements. With the closure of the Environment Chapter for nine applicant countries, the focus must shift to monitoring to ensure that the CEE applicant countries live up to their promises

to achieve full compliance by the time of accession, especially where no post-accession transition periods have been agreed.

This report is a thematic report. It provides an update of the enlargement process and reviews many (but not all) of the environmental issues that must be addressed as part of the accession process. It focuses particularly on the investment-heavy environmental acquis and considers the cost implications of achieving compliance with these demanding requirements. It stresses that the Member States – as the final negotiators of the enlargement – must continue to pay close attention during this final stage of the enlargement process, in order to ensure that the environment remains an important issue and that the promises made by the applicant countries with regard to the Environment Chapter will be kept.



CHAPTER 2

THE PROCESS OF ENLARGEMENT

The current enlargement process started when the CEE applicant countries signed their Europe Agreements – 1991 for Hungary and Poland; 1993 for Bulgaria, Czech Republic, Romania and Slovakia; 1995 for Estonia, Latvia and Lithuania; and 1996 for Slovenia. The Europe Agreements covered trade-related issues, political dialogue, commitment to legal approximation, and other areas of cooperation, including industry, environment, transport and customs. They committed the applicant countries to bring their legal frameworks into compliance with Community legislation, including the environmental legislation.

In its broader context, the enlargement process is based on the so-called Copenhagen criteria (from the 1993 Copenhagen summit where they were adopted) – that in order to join the EU, applicant countries will have to demonstrate:

- stability of institutions guaranteeing democracy, the rule of law, human rights and respect for and protection of minorities;
- a functioning market economy able to cope with competitive pressure and market forces within the EU;
- ability to assume the obligations of membership, including adherence to the aims of political, economic and monetary union.

Formal negotiations were to be opened only after convincing progress in all three areas had been made.

The decision that some of the CEE applicant countries had reached this stage was taken in late 1997 at the Luxembourg Council, after the July 1997 publication of the European Commission's policy document, Agenda 2000. Negotiations were formally opened on 31 March 1998 with the so-called Luxembourg group of countries – Estonia, Poland, the Czech Republic, Hungary, Slovenia and Cyprus. Following strong pressure from the remaining countries, it was agreed at the December 1999 Helsinki Council to take a more flexible, multi-speed approach to enlargement and to admit all of the candidate countries to negotiations. The Helsinki Council also confirmed the status of Turkey as an applicant country. Formal negotiations were then opened on 15 February 2000 with the Helsinki Group, i.e. Bulgaria, Latvia, Lithuania, Romania, Slovakia and Malta.

Accession negotiations are carried out individually with each country on the basis of a thorough screening of the *acquis* (as divided in 31 chapters based on different policy sectors). During the screenings, the applicant countries are asked:

- if they accept the targeted chapter;
- if they intend to request transitional periods after accession for achieving compliance;
- if national legislation fully complies with the *acquis* (if not, target dates for full compliance);
- if administrative structures are able to implement the *acquis* (if not, target dates for completing administrative framework).

Initial "screening" of the applicant countries' status vis à vis the EU environmental requirements adopted to date began in April 1999 and concluded in November 1999 with the screening of Malta. In March 2000, the European Commission continued the screening exercise for the legislation adopted in 1999 via a written procedure. On the basis of the Commission's screening reports and recommendations, the Council of Ministers decided whether and when negotiations should be opened with individual countries on specific chapters.

Year of the CEE applicant countries signing their Europe Agreements

1996	Slovenia
1995	Estonia, Latvia and Lithuania
1993	Bulgaria, Czech Republic, Romania and Slovakia
1991	Hungary and Poland

The European Council at Nice confirmed that the enlargement process is irreversible, but no definite date has been set. The Council stated that the scheduling of the next enlargement should permit the prospective Member States to participate in the next elections for the European Parliament in mid-2004. However, this depends not only on preparations in the applicant countries, but on the existing EU Member States agreeing their respective positions⁽⁴⁾.

The European Council at Gothenburg reaffirmed the irreversibility of the process and the role of the road map as the framework for successful completion of enlargement negotiations.

Partnership and Co-operation Agreements

This discussion of the process of enlargement would not be complete without a reference to the former Soviet Union countries of Eastern Europe and Central Asia that have formalised their relations with the EU by negotiating individual Partnership and Co-operation Agreements (PCAs). Each PCA is a ten-year bilateral treaty that sets forth a legal framework based on the respect of democratic principles and human rights. It defines the political, economic and trade relationship between the EU and the partner country and commits the partner country to bringing its legal system closer to the requirements of the European Union. PCAs are now in force with ten Eastern European and Central Asian countries. Several of these countries, e.g. Ukraine and Moldova, are already taking serious steps towards harmonising with the EU environmental acquis.

The Stabilisation and Association Agreements

The Stabilisation and Association Agreements (SAAs) negotiated between the EU and the five Balkan countries that are not yet applicant countries, also serve as formal mechanisms that enable the EU to work to bring each country closer to the standards which apply in the EU. As of November 2001, the EC has signed SAAs with Croatia and the Former Yugoslav Republic of Macedonia⁽⁵⁾.



CHAPTER 3

ENLARGEMENT NEGOTIATIONS AND THE ENVIRONMENT CHAPTER

The formal opening of the negotiations of the Environment Chapter of the *acquis communautaire* took place for the first applicant countries towards the end of 2000. In March 2001, Slovenia became the first applicant country to close provisional negotiations on the Environment Chapter. By the end of July 2001, the Czech Republic, Estonia, Hungary, Lithuania and Cyprus had also provisionally closed their Environment Chapter negotiations. Poland provisionally closed Environment Chapter negotiations by the end of October 2001, and Latvia closed three weeks later. At the beginning of December 2001 Slovakia also succeeded to provisionally close the Environment Chapter.

At the end of November 2001, Bulgaria and Malta were still in the midst of negotiations with the EU concerning the environment chapter. Romania had officially submitted its negotiation position, while Turkey was still at the beginning of the accession process.

The EU environmental and as well as agricultural *acquis* are considered the most difficult to implement of all the EU legal obligations. In the coming enlargement, therefore, environmental issues have been at the forefront of the negotiations between the EU and the applicant countries. A number of Member States have voiced concern that the applicant countries may not achieve environmental compliance by the time of accession. The Danish Government has recognised the difficulties faced by the CEE applicant countries in achieving compliance in the environment sector and, through the DANCEE programme, provided substantial assistance to several applicant countries in their EU approximation efforts.

The European Commission's Environment Directorate General has taken a dynamic approach. On the one hand, it started to provide support to the CEE applicant countries for achieving compliance with the EU obligations in its area before any other Commission service⁽⁶⁾. At the same time, it has carefully monitored the progress of the applicant countries in their pre-accession preparations in the environment sector, tracking transposition and implementation in detail.

Several CEE applicant countries have voiced concern that they are being subjected to higher scrutiny in the environment sector concerning their accession preparedness than previous EU candidate countries. But this ignores the many ways in which this enlargement is different from previous enlargements.

Experience from other enlargements

The 1995 enlargement brought Austria, Sweden and Finland into the fold of the EU. All three countries were acknowledged to have high standards of environmental protection. They had already joined the European Economic Area Agreement (EEA) and had therefore already harmonised their laws with all Internal Market legislation except for fisheries and agriculture requirements. Approximation with the remaining EU environmental requirements was therefore not a major hurdle.

At the time of the two previous enlargements (Greece, 1981; Spain and Portugal, 1986), the EU environmental requirements were still relatively new and mostly related to Internal Market requirements. The investment-heavy directives setting requirements for urban waste water treatment, large combustion plants, incineration, integrated pollution prevention and control (IPPC), and landfills had not yet been set in place. While the overall procedure was the same, the questions asked during the

screening process did not go into the same detail as the current negotiations. The countries were asked if they accepted the EU rules and could achieve compliance. Though a few transition periods were negotiated at the time of accession, for the most part the EU accepted the three countries' assurances that they would be in compliance as of the date of accession.

It only became apparent after accession that these countries had particular environmental problems and lacked the financial resources to deal with them. The EU – through its Structural Funds and the Cohesion Fund – has made and continues to make significant transfers of funds so that the three countries (and Ireland, which joined in 1973 with Denmark and the UK) could build the public sector infrastructure needed to comply with the environmental acquis.

The enlargement most relevant to the CEE applicant countries occurred with the reunification of Germany in 1990. German officials assured the then European Community that they would be able to bring the neue Länder into compliance with EU environmental standards by the mid-1990s. However, the task of upgrading public sector environmental infrastructure and controlling sources of industrial pollution proved to be much more expensive and time-consuming than originally estimated, and the promise of compliance by the mid-1990s could not be achieved.

The EU institutions have indicated the importance of learning from these past enlargements and to take a more realistic approach in their expectations concerning the applicant countries' capacities to achieve environmental compliance, especially given all the developments in the EU environmental acquis in the past 15 years. Part of the impetus for this has been the insistence of those Member States that are net contributors to the EU budget that they will not accept paying large amounts for environmental clean-up and other accession-related costs in the CEECs. A realistic approach is especially necessary given the scale of the coming enlargement – perhaps as many as ten countries at once, with a combined population of 105 million people.



Environmental "approximation"

The Copenhagen criterion most relevant for the environment is the third criteria – ability to assume the obligations of membership. One of the defining elements is whether the applicant country has harmonised national legislation and practices to conform with existing EU requirements (the *acquis communautaire*). In EU terminology, this process has come to be known as "approximation". Officials from the European Commission have defined "approximation" as consisting of:

- precise transposition of the relevant EU legislation⁽⁷⁾;
- having in place the necessary administrative and other structures for implementation and enforcement.

The applicant countries are also required to ratify all international conventions to which the EU is a party (see section 4.8 for further discussion on this).

Candidate countries have been progressing steadily in the task of drafting national laws and administrative regulations to transpose the EU obligations, so transposition is not expected to be an obstacle to early membership. However, the second element – establishment of a sufficient administrative capacity to implement and enforce the legislation – is more difficult, especially in the environment sector. Enforcement of environmental legislation was particularly weak during the socialist period. The rapid enactment of a vast amount of new environmental legislation is placing major burdens on the administrative capacity of implementing agencies and local administrations. This is an area where donor support and assistance will be needed for the years to come, and not only for the applicant countries in the second wave of enlargement. Even the countries in this coming enlargement are likely to need assistance on building administrative capacity and other implementation measures.

Post-accession transition periods for compliance

The EU recognises that post-accession periods of transition will be necessary for the heavy-investment directives. Denmark, in line with several other Member States and the European Parliament, has taken the view that transition periods should be granted only in exceptional cases and only for short time periods. This applies to environmental legislation as to the rest of the *acquis communautaire*.

The EU has taken several non-negotiable positions with respect to the environmental *acquis*. One is that the applicant countries must comply with all Internal Market-related environmental legislation upon accession. This covers important legislation such as motor vehicle emissions, fuel quality, control over chemicals, and general requirements for waste management. Parts of non-market legislation such as nature protection are subject to a similar requirement.

Transitional periods may be considered in legislation where the applicant countries will not be able to comply fully with the requirements of the respective legislation on the day of EU membership, e.g. where financially heavy investment will be required or where immediate compliance would have unacceptable social implications. According to this reasoning, DG Environment has signalled the following acceptable and non-acceptable positions:

- a) Acceptable transitional periods: urban waste water treatment and large combustion plant requirements;
- b) Negotiable transitional periods: packaging waste and industrial pollution prevention and control requirements;
- c) Unacceptable transitional periods: all framework Directives, (e.g. air quality, waste and hazardous waste framework, radiation protection), nature protection, access to information, environment impact assessment.

The applicant countries were first given the opportunity to request transition periods during the 1999 screening process. The table on the next page provides the transition periods that were originally requested (shaded columns). For the six CEE countries that have provisionally closed the Environment Chapter, the table provides the transition periods agreed with the EU as of November 2001 (unshaded columns).

As the table shows, most of the transition periods requested by the countries were not in the end accepted by the EU negotiators. Out of the 27 Directives for which transition periods were requested, but not by all countries, transition periods were provisionally agreed only for five – the Urban Waste Water Treatment, Landfill, Packaging Waste, VOCs Stage I, and Large Combustion Plants Directives. Whereas Hungary, Slovenia, and Poland were granted transition periods until 2015 to comply with the Urban Waste Water Treatment Directive requirements, Lithuania's request for a transition period until 2015 was negotiated into a transition period of 2009. Similarly, its transition period request of 2010 for the Packaging Waste Directive was reduced to 2006. Other reductions in transition periods were made for Estonia (Landfill Directive transition period request of 2013 reduced to 2009), Hungary (Large Combustion Plants Directive request of 2008 reduced to 2004), and Poland (VOCs Stage I Directive request of 2009 reduced to 2005).

In looking at the differences between the original requests and the dates actually agreed, the reader might well wonder whether these transition periods are based on real information concerning actual length of time needed for compliance, or whether they are more politically driven. It is quite possible that the applicant countries, in their original requests for transition periods, inflated estimates of the time needed to achieve compliance. But even allowing for this, the final negotiated transition periods seem unrealistically short. Moreover, it is important to remember that for all the transition periods not agreed, the applicant countries have in effect promised to be in compliance at the moment of accession.

The position of the Commission's DG Environment has been that applicant countries requesting transition periods must present supporting Directive-specific implementation and financial plans (DSIFP) to show how they will achieve compliance by the end of the transition period⁽⁹⁾. In order to get a transition period provisionally agreed, the applicant countries have been expected to show that they have a serious plan in place concerning how they will implement and finance the necessary measures. This is to include careful investment planning, a process encouraged within the framework of the DG Environment's PEPA Programme (Priority Environmental Projects for Accession). The focus is on the activities to be undertaken during the transition period, rather than on the final date of full compliance. DG Environment has suggested that the following elements be included in the DSIFPs: introduction

¹ Oil shale only (hazardous waste).

² Request implies transitional period under LCPs Directive for one existing plant and will be dealt with once this Directive is revised (end 2001).

³ For certain types of waste the period could be extended after accession to 2012.

* Note: Transition periods cover until 31 December of the requested year. For more detailed information, and intermediate target dates for compliance, see Common Positions.

Table 3.1 Transition Periods requested and/or negotiated (November 2001)

Sector/Directive	Transition periods requested in negotiating positions (1999-2000)											
	Transition periods agreed at provisional closure of Environment Chapter (5 November 2001)											
	CZ		EE		HU		LT		PL		SLO	
Water												
- Urban waste water treatment	2010	2010	2010	2010	2015	2015	2015	2009	2015	2015	2015	2015
- Drinking water	2006		2013				2015					
- Nitrates	2006						2011					
- Dangerous substances	2008		2006		2009				2008	2006		
- Groundwater			2006		2007							
Waste												
- Landfill			2013	2009 ¹			2015		2012	2012		
- Packaging	2005	2005			2005	2005	2010	2006	2007	2007 ³	2007	2007
- Hazardous waste												
- Incineration of e.c. Hazardous waste/ municipal waste (old)					2005							
- Shipment of waste									2012	2012		
Air quality												
- VOCs Stage I			2007	2007					2009	2005		
- Sulphur content of e.c. fuel							2010	2007		2006		
- Quality of Fuel											2004	
Industrial pollution												
- Lg e.c. Combustion Plants		See footnote ²			2008	2004			2010			
- IPPC	2012	2012 ²							2011	2010	2011	2011
- Major accident hazards					2004							
- Solvents									2010			
Nature Protection												
- Wild birds							2010					
- Habitats	2005						2010					
Radiation Protection												
- Medical e.c. Exposures										2006		

CZ: The Czech Republic, EE: Estonia, HU: Hungary, LT: Lithuania, PL: Poland, SLO: Slovenia



(requirements of the Directive and transitional periods requested), steps required for full implementation, strategy for implementation, financing costs of implementation, and implementation plan. The implementation plans will become part of the accession treaties, and will be monitored after the accession.

As of November 2001, those countries which already closed the environmental chapter, i.e., Cyprus, the Czech Republic, Estonia, Hungary, Lithuania, Poland and Slovenia, had presented either cost estimates or implementation plans for the Directives for which they had requested transition periods, and some countries had presented both. Failure to present credible environmental investment programmes where transition periods were requested had, on the other hand, delayed accession negotiations for several countries.

In mid-2001, this strong emphasis on implementation and environmental investment planning appeared to be in danger of being shunted aside in the accession process. In the push to achieve the political goal of the enlargement, the Council and the DG Enlargement had reportedly become much more lenient in the signals they were sending to the applicant countries concerning their implementation of the environmental acquis⁽⁹⁾.

The EU institutions have not yet clarified how they expect to monitor the measures taken by the applicant countries in the period leading up to accession and during the post accession transition periods, in order to ensure that compliance is achieved in fact. This is potentially a cause for concern, since once Member State status is achieved, the power of the EU institutions to bring pressure for compliance is more limited. To be sure, failure to fulfil a treaty obligation can lead to legal action brought by the Commission before the Court of Justice on the basis of Article 226 of the Treaty of Amsterdam (ex-Article 169), including the risk of significant fines imposed on a daily basis. However, this is a time-consuming and not always certain process.

The emphasis on the steps that need to be taken during the transition period, deserves the support – politically and particularly financially – of the Member States. In the period before accession, Community financial support will be limited only to the amount available through the ISPA and the Phare instruments. Section 4 of this report describes how both of these instruments have much more modest resources than may be forthcoming through structural funds after full membership.

CHAPTER 4

THE ENVIRONMENTAL ISSUES AT STAKE IN THE ENLARGEMENT

PAGE 14

In considering the environmental implications of the enlargement, it is useful to reflect on the situation in the CEE applicant countries just a decade ago, and to review some of the lessons learned in the intervening years concerning cost-effective approaches in achieving environmental improvements.

At the beginning of the 1990s, the information coming to Western Europe about the environmental situation in the CEECs emphasized the heavily polluting and inefficient industrial facilities, the lack of sound water supply systems to deliver safe drinking water, and the dearth of waste water treatment. Heavily polluted rivers from the former communist countries endangered the Baltic Sea in the north, and the Black Sea in the southeast. Cities suffered under blankets of pollutants from coal-fired municipal boiler plants and household heating, and high emitting motor vehicles. Unprotected disposal of hazardous and municipal waste led to widespread contamination, in many areas threatening groundwater stores used for drinking water.

The CEE citizens' green movements that arose in the 1980s in response to these problems were a vital part of the popular tide pushing for change. But with the fall of the socialist regimes ten years ago, most Central and Eastern European countries suffered serious economic – and social – setbacks. Fortunately, most CEE applicant countries have managed to reverse economic decline and register significant gains.

Against this backdrop, it is not surprising that economic development has been the priority over other objectives in recent years. Even so, environmental concerns have managed to maintain momentum.

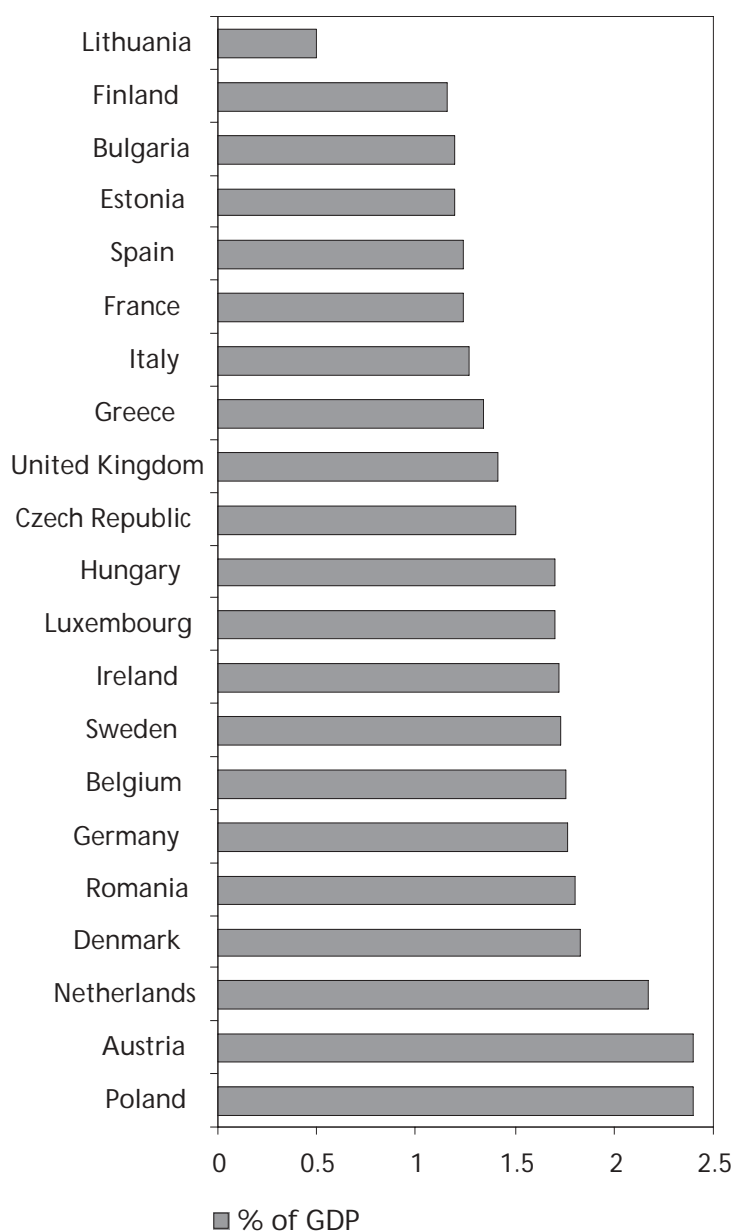


There are several explanations behind this. For one, environmental NGOs were among the earliest and strongest to establish an organised input to governments from civil society, and they continue to play a role in environmental protection matters in the region.

Another explanation is that the excessive pollution stemming from the socialist period obviously had to be corrected. The "Environment for Europe" process brought western European ministers of environment together with their counterparts from Central and Eastern Europe. They formed a task force that led to the Environmental Action Plan for Central and Eastern Europe, a regional strategy aimed at clean-up of the most urgent "hotspots". International organisations and financial institutions, such as the OECD, UNECE, the World Bank and EBRD, and bilateral donors including Denmark, provided resources to support the new political regimes in mounting a response.

Throughout the "Environment for Europe" process, the OECD, international financial institutions such as the World Bank and individual think tanks⁽¹⁰⁾ have stressed the importance of cost-effective implementation of environmental legislation. During socialism, inputs into industrial production were not properly priced, leading to wasteful pollution. Because the input of natural resources (primarily energy and water) into existing production processes is still very high, there is a strong risk that scarce financial resources may be wasted in unnecessary over-investment in air emissions controls, waste water treatment plants and solid waste management capacity. Unless natural resources and environmental services are properly priced, continued over-use will continue to burden the environment as well as hinder much needed economic development in the countries in question.

Figure 4.1 Environmental protection expenditure as a percent of GDP



The argument has been made that low cost water, energy or waste treatment services are important elements of a social policy to make life easier for those who are already suffering from the impact of economic transition. However, delivering these services at a level below cost puts additional pressure on already constrained public budgets, thus constraining the means for proper social policies.

Despite international support, the process of environmental reform had little momentum until EU accession issues came to the fore. The strong message to the CEE applicant country governments that respecting the EU environmental legislation, is a pre-requisite for EU membership – and a relatively demanding one when it comes to financing – has provided an important incentive for taking environmental protection actions. A recent study from EUROSTAT⁽¹¹⁾ indicates that the CEE applicant countries spend on average two per cent of GDP on environmental protection, twice the estimated EU average (see Figure 4.1). On the other hand, CEE per capita environmental expenditure is lower than in the EU because GDP per capita is considerably lower.

Whatever the relative importance of the reasons behind the ongoing activities, it is beyond doubt that the EU insistence on approximation as a pre-condition for accession, combined with various assistance, has played a crucial role in enabling the applicant countries to make significant gains in environmental clean-up in recent years. But much remains to be done.

The following sections look at the various environmental sectors as regulated by the environmental acquis, along with some of the economic and political implications of implementing the EU requirements in the context of CEE accession.

4.1 Water quality and water pollution control

EU water legislation covers a wide range of issues and is expected to be among the most difficult, and expensive, of the EU requirements to implement. Most, if not all, of the applicant countries have asked for transition periods in this sector. Several countries, i.e., Hungary, Poland, and Slovenia, have 2015 for final compliance with the Urban Waste Water Treatment Directive, ten years later than the final compliance date for Member States laid down in the Directive⁽¹²⁾.

Other demanding water-related acts are the Drinking Water Directive, the Bathing Water Directive, the Nitrate Directive, and a number of directives addressing discharges of different dangerous substances.

The newly adopted Water Framework Directive will be particularly demanding in requiring Member States to achieve "good ecological status" and "good chemical status" for all surface and ground water, by 2010. The Directive lays down procedural requirements to be applied in the future for integrated water resources' management on the basis of river basins. River basin authorities will be required to monitor water quality and quantity, set quality standards, establish rules for water abstraction and waste water discharge permits, and develop action plans to ensure that agreed quality objectives will be met. Public participation in the process is essential. In some applicant countries, e.g. the Czech Republic, the Directive's emphasis on integrated water resources management has resulted in a reduction in the power of ministries of environment to control water

quality, after the designation of ministries involved in natural resources management as the competent authorities.

Implementing the water policy legislation will be very demanding and costly for all new members, in administrative, financial and political terms. The legislation requires activation of a huge number of operators (local municipal governments, farmers, small and medium-sized industries). Experience shows that it is far from easy for many stakeholders to accept having to pay for water services that used to be free (or almost free). On the other hand, there have been positive experiences when users willingly pay more for provision of better services.

There is no generally easy option for meeting the EU urban waste water treatment requirements, unlike in many cases of industrial pollution where process modifications can often deliver cheaper solutions than end-of-pipe treatment. This is not to say that investment and operating cost is insensitive to clever planning and good management of the process. In fact, one of the objectives of the Water Framework Directive is specifically to make sure that different objectives are achieved through a cost-effective and comprehensive decision-making process. This, however, requires well-staffed local and regional administrations willing to cooperate on planning and financing of water-related infrastructure as well as external expertise.

The Baltic States are relatively advanced in establishing waste water treatment facilities, partly because of assistance received from Denmark and other Nordic donors to meet commitments made in the context of the Convention on the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention). Proper pricing of and payment for treatment of waste water has been less easy to organise. A few waste water treatment plants built in the Baltic States the early 1990s are having problems because they were designed and built using outdated assumptions concerning the amounts

Table 4.1: Estimated costs for Implementing Urban Waste Water Treatment requirements including sewerage

CEE Candidate Country	Population in 2000	Est. cost of UWWT investment needed ⁽¹³⁾	Estimated per capita cost
Bulgaria	8 million	2056 MEUR	257 EUR
The Czech Republic	10 million	1164 MEUR	116 EUR
Estonia	1 million	168 MEUR	168 EUR
Hungary	10 million	1678 MEUR	168 EUR
Latvia	2 million	579 MEUR	290 EUR
Lithuania	4 million	435 MEUR	109 EUR
Poland	39 million	6414 MEUR	164 EUR
Romania	22 million	1385 MEUR (sewerage only)	63 EUR
The Slovak Republic	5 million	499 MEUR	100 EUR
Slovenia	2 million	914 MEUR (sewerage only)	457 EUR
Total population	103 million	15292 MEUR	148 EUR (ave.)



of water that would need treatment. After increased prices for water supply and collection/treatment took effect, the use of water dropped significantly, leading to reduced revenues and difficulties in paying back international loans.

In other countries, the progress with respect to waste water treatment varies widely. The CEE applicant countries have developed a series of estimates of the cost of implementing the more demanding directives. The Urban Waste Water Directive is expected by all countries to be the most expensive, with a total investment cost of around 15 to 25 billion EUR. When overall national estimates are divided by population figures, the estimated per capita investment for both sewerage and sewage treatment ranges from 100 EUR (Slovakia) to 290 EUR (Latvia).

The wide variance among these estimates is remarkable. For example, Romania is a relatively poor applicant country. The low estimate of 63 EUR per capita to complete the sewage collection systems and waste water treatment plants needed for EU compliance in Romania contrasts sharply with the estimate of 457 EUR per capita for Slovenia, the most advanced applicant country and with already well-developed infrastructure.

However, a similar spread in figures can be seen in Table 4.2 below, which provides figures collected from the current Member States for the European Commission's 1998 report on status of

Table 4.2: Forecasted investments in collecting systems and waste water treatment plants for Member States 1993-2005 (in billion EUR – value 1994-95)*

Member State (average cost p.e.)	1993-2000			2001-2005			1993-2005		
	Collecting system	Treatment plants	Total	Collecting system	Treatment plants	Total	Collecting system	Treatment plants	Total
Belgium (426)	1.01	1.40	2.41	0.75	0.74	1.49	1.77	2.14	3.90
Denmark (488)	1.30	1.30	2.60	1.10	0.40	1.50	2.40	1.70	4.10
Germany (602)	25.89	24.66	50.55	9.41	4.21	13.62	35.30	28.87	64.17
Greece (112) *	0.44	0.73	1.17	-	-	-	0.44	0.73	1.17
Spain (146)	3.68	4.90	8.58	1.03	1.26	2.29	4.70	6.15	10.87
France (171)	4.94	3.74	8.60	3.08	0.28	3.36	8.02	4.02	12.04
Ireland (415)	0.34	0.79	1.13	0.15	0.35	0.50	0.49	1.14	1.63
Luxembourg (293)	0.00	0.25	0.25	0.00	0.02	0.02	0.00	0.27	0.27
Netherlands (170)	1.10	1.83	2.93	0.00	0.00	0.00	1.10	1.83	2.93
Austria (527)	5.20	1.42	6.62	2.47	0.70	3.17	7.67	2.12	9.80
Portugal (145)	1.41	0.87	2.28	0.04	0.07	0.11	1.45	0.94	2.40
Finland (386)	0.65	0.37	1.02	0.35	0.18	0.53	1.00	0.55	1.55
Sweden (387)	1.00	1.20	2.20	0.40	0.30	0.70	1.40	1.50	2.90
United Kingdom (164)	1.47	7.20	8.67	1.31	2.55	3.86	2.78	9.74	12.53
Total	48.43	50.56	99.09	20.09	11.06	31.15	68.53	61.70	130.26

*Value 1996-97 for the United Kingdom; Greece has provided figures only for the period 1993-2000.

p.e.: person equivalent

implementation of the Urban Waste Water Treatment Directive. This table indicates that the 14 Member States providing information foresaw a total investment of 130 billion EUR. The average cost for the 14 Member States as a whole is EUR 307 per person equivalent (p.e.), but this varied from 112 EUR per p.e. in Greece to 602 EUR per p.e. in Germany.

The table indicates that the Member States planned investments totalling 130 billion EUR, 53% of which was for collecting systems.

The fact that most of the waste water discharged in the applicant countries will flow into areas sensitive to eutrophication, (e.g. the Baltic Sea) will also tend to push investment upwards, since in such cases the Urban Waste Water Treatment Directive requires an additional level of chemical treatment to remove the phosphates and other nutrients that contribute to eutrophication.





The Drinking Water Directive is the second most investment-heavy piece of water legislation. In general, applicant countries estimate investment in drinking water upgrading to be less than in waste water treatment, albeit not dramatically less. Investment of around 10 billion EUR seems to be the most accurate overall estimate so far. As Table 2.1 shows, most applicant countries expect to be able to meet the drinking water requirements a number of years earlier than for urban waste water treatment, which is highly desirable also for reasons other than direct health protection (such as food industry export and tourism).

The potential for proper public/private cooperation should be given priority in the planning of future investments in the water sector, which are often de facto government monopolies managed at central, regional or local levels. Involving the private sector in the planning, financing and eventual operation of the infrastructure may offer significant economic gains, particularly in situations where local administrations lack resources and expertise.

Investment estimates for the remainder of EU water legislation are sporadic and generally considered to be much less than for drinking water and urban waste water. Bathing water standards will normally be met via proper waste water treatment and/or proper location of discharge points and thus will be covered for the major part, once investments in sewerage and waste water treatment are made.

4.2 Air Quality

Over the past decade, air pollution problems in the CEECs have shifted from being a matter of reducing emissions from large industrial installations and coal-burning combustion plants to more complicated scenarios of handling the impacts from increased motor vehicle traffic and other smaller sources. Whereas industrial point sources of emissions are relatively easy to identify (and reduce), old, badly maintained motor vehicles are today a more significant contributor to bad urban air quality.

In any case, the actions needed to meet EU air quality standards and emission limits for precursors of acidification and ground level ozone are likely to require significant investment in the CEE applicant countries, including after accession.

The European Commission has already indicated that the applicant countries are not likely to get significant transition periods for ambient air quality legislation. The air quality framework directive and daughter directives have been adopted only recently. The applicant countries will in most cases have the same amount of time to comply as EU Member States.

In addition, a number of measures to improve air quality are Internal Market measures (car emissions, fuel quality) which new Member States will be expected to follow, at the latest from accession if they have not done so before.

A number of areas, however, remain problematic and will definitely benefit from external assistance. The most obvious of these is proper air quality monitoring. Apart from being a requirement in EU air quality legislation, proper air quality monitoring is also the key first step in identifying cost-effective

strategies to improve air quality. For example, countries that have had big imports of older, used cars might benefit from assistance to establish proper motor vehicles inspection facilities. Scrapping incentives for old vehicles might also prove to be a cost-effective approach, in comparison to controls over smokestack emissions from smaller point sources.

The necessary restructuring of activities in the industrial and energy sectors that followed the transition to market economy has had a positive effect on emission of air pollution in many of the applicant countries, particularly with respect to the largest sources. This development is likely to continue in the years to come.

Nonetheless, energy consumption per GDP unit is still roughly five times as high in the CEE applicant countries than in the EU Member States⁽¹⁴⁾. This indicates a high potential for improved energy efficiency that in turn will lead to reduced emissions. This will often have the additional benefit of improved competitiveness of the industries involved.

Most of the investments in air emissions control will fall in the private or privatised sectors and be recoverable via proper pricing of the products, be it cars, fuels or electricity. However, investment in certain types of public sector infrastructure such as district heating or natural gas distribution will require financial assistance.

Solid fuel (coal, lignite) is still being used for power production and domestic heating in several applicant countries, often causing air pollution above acceptable levels. There are many possible solutions, including fuel switching, combined heat and power production, and district heating. In many cases, energy savings will provide a cost-effective contribution to the solution of the problem. Expensive end-of-pipe solutions such as flue gas desulphurisation should only be applied to existing facilities on a case by case basis when it has been proven to be the best overall solution.

The 1997 DEPA report⁽¹⁵⁾ estimated that investments of 30 billion EUR (220 billion DKK) in flue gas desulphurisation and NO_x reduction from large combustion plants would be needed. But it seems unlikely today that investment in that magnitude will be necessary.

The investment estimates for implementation of the Large Combustion Plant Directive shown in the table below. They add up to less than 10 billion EUR for all applicant countries, and there is still reason to question whether the relatively high estimates for Bulgaria and the Czech Republic represent cost-effective solutions.

Moreover, the Common Position (EC) No. 52/2000 on the limitation of emissions of certain pollutants into the air from large combustion plants allows existing plants to operate at current emission standards until 2008 with a possibility for additional operation during several years, by which time most of the older CEE power plants will need to be replaced in any case.

Consequently, even if no transition periods are granted beyond those permitted in the revised LCP directive, the CEE applicant countries will not be likely to invest in costly flue gas cleaning, as

Table 4.2 Estimated costs for the implementation of Large Combustion Plants requirements

CEE Candidate Country	Population in 2000	Est. cost of large combustion plant requirements ⁽¹⁶⁾	Per capita Cost
Bulgaria	8 million	1627 MEUR	203 EUR
The Czech Republic	10 million	1858 MEUR	186 EUR
Estonia	1 million	312 MEUR	312 EUR
Hungary	10 million	878 MEUR	88 EUR
Latvia	2 million	43 MEUR	21 EUR
Lithuania	4 million	74 MEUR	18 EUR
Poland	39 million	3456 MEUR	89 EUR
Romania	22 million	402 MEUR	18 EUR
The Slovak Republic	5 million	796 MEUR	159 EUR
Slovenia	2 million	180 MEUR	90 EUR
Average		9627 MEUR	93 EUR

previously believed. However, investment will be required for continuous upgrading of the energy sector, probably well above the 10 billion EUR mentioned above. This investment will add to the economic performance of the countries, rather than being a burden on competitiveness. The ongoing liberalisation of gas and electricity markets will definitely assist in that process.



4.3 Waste management

In Central and Eastern Europe Waste management is an area where much has to be done in order to bring the situation up to EU standards. Legislation to be complied with is partly of a general nature, such as the framework directive on waste or the directive on hazardous waste. Other directives address waste treatment or disposal (incineration, landfills), or certain categories of waste (waste oils, batteries, packaging etc.).

In general, the CEE applicant countries suffer from a lack of adequate facilities to properly treat and dispose existing waste streams. Some countries also lack proper collection systems, and illegal handling of waste of all sorts is widespread. In addition, hazardous waste is often not separated from ordinary waste, leading to serious pollution from inadequately protected landfills.

Several applicant countries are seeking transition periods for the investment-heavy directives on landfill, incineration and packaging waste. On the other hand, the European Commission has made it clear while negotiating transition periods that the framework waste and hazardous waste directives – requiring that systematic waste collection and disposal will be organised in an environmentally safe way – should be applied immediately upon accession. In any case, payment for waste collection and treatment or disposal should be introduced as quickly as possible.

Many countries have not yet prepared the national waste management plans required under EU law. Consequently, some countries' estimates of necessary investment in the waste sector are incomplete. Most countries appear to be planning major investments in controlled landfills. Overall cost estimates for the 10 CEE applicant countries are in the range of 13 billion EUR. Plans for investment in incinerators or facilities to treat hazardous waste are not as well developed, but costs are unlikely to be as significant.

In most CEE countries, construction of landfills for municipal solid waste is treated as a public sector investment problem. However, the Czech Republic and the Slovak Republic have both had success in providing incentives for the private sector to finance investment in treatment and disposal facilities.

Hazardous waste creates a particular problem. Quantitative assessment of different types of hazardous waste, and particularly of future trends, are difficult to achieve, both because of insufficient administrative capacity to collect the data and because of the rapidly changing industrial structure in the countries. Hazardous waste still remaining from industrial productions now closed down is widespread and poses a particular problem since there is no responsible operator to pay for the removal, treatment or disposal cost. The same problem applies to many heavily polluted industrial sites which, since not covered by existing EU legislation, seem to have a somewhat lower priority for the time being, but which may interfere with meeting EU drinking water standards.

Hazardous waste treatment facilities are often highly specialised, particularly if they are to provide a high degree of material recovery, and will often require much bigger amounts of waste being treated than the smaller applicant countries will produce individually in the foreseeable future. Cooperation

between the applicant countries will be highly desirable in this area, not only as a way to pursue cost-effectiveness in general, but also to keep treatment costs at a level where they can be managed by local industries.

Providing the facilities is no guarantee that the waste will arrive as it should. To ensure that the system works takes a comprehensive system of legislation, infrastructure facilities and a reliable enforcement structure. Price structures are also important since too high prices for waste management or disposal will create permanent incentives to find "alternative", often illegal, solutions.

4.4 Industrial Pollution

Industrial pollution is partly covered by the IPPC Directive (Integrated Pollution Prevention Control), partly by a number of specialised directives covering a specific "sector" (large combustion plants) or specific emissions (volatile organic compounds, dangerous substances to water). Pollution from some industrial activities may not be directly covered by existing EU legislation, but will nevertheless still have to be addressed in order to achieve the required air or water quality standards.

Industrial pollution in Central and Eastern Europe is, for the time being, at a crossroads. The closure of many heavily polluting industrial activities after the fall of the communist regimes (mainly because of economic inefficiency), has delivered a much needed reduction in industrial pollution. However, many of the surviving industries are still polluting well above acceptable levels. Meeting the requirements of the IPPC Directive by the deadline for existing plant of 2007, is one of the more demanding parts of EU environmental legislation, particularly where surviving industries are still struggling with outdated equipment and a weak financial basis.

Several applicant countries have already been granted a longer transition period for the IPPC Directive, justified by relatively high estimates of investment necessary to comply with the directive. Information from those countries that have come forward with estimates points towards an overall investment around 20 billion EUR⁽¹⁷⁾.

These numbers should, however, be considered very carefully. Firstly, there may be some overlap with costs related to waste management or large combustion plants. Secondly, the level of pollution control required in order to meet the IPPC Directive standard of best available technology is still being discussed within the Commission, and even the existing Member States find it difficult to calculate their future investments.

Thirdly, and probably most important, many of the industrial plants in question will not have a residual, economically efficient lifetime to justify a major investment only in environmental control, such as end-of-pipe solutions. Several industrial sectors, e.g. oil refining and energy production in general, are already undergoing a major restructuring in order to be competitive in a liberalised market and in order to deliver fuels according to EU specifications. Such technological restructuring can in itself often lead to reductions in polluting emissions. When measures aimed at upgrading environmental performance are carried out at the same time, it can be difficult to separate the different measures. In such cases, measures to upgrade environmental performance are considered an integrated part of such a technological restructuring and financed as such.

Table 4.3 Investments needed to comply with the IPPC Directive (FN: Ibid.)

CEE Candidate Country	Estimated cost of IPPC investment needed
Bulgaria	3261 MEUR
The Czech Republic	3725 MEUR
Estonia	489 MEUR
Hungary	1761 MEUR
Latvia	90 MEUR
Lithuania	44 MEUR
Poland	6927 MEUR
Romania	806 MEUR
The Slovak Republic	1596 MEUR
Slovenia	50 MEUR
TOTAL	18.478 MEUR

Investment in financial and technological restructuring of the existing industry in Central and Eastern Europe will primarily be a task for private industries. Certainly, pollution from industrial sources should be addressed where action is needed and the investment justified. However, in some areas where closing one or a few big industrial enterprises will have unacceptable impacts on local employment, the ultimate decision may have to include social considerations.

In accordance with this, the position in the European Commission so far has been that no transition period will be granted for the IPPC Directive as such, but requirements for individual existing plants might be considered on an ad hoc basis where sufficient justification is provided.

Relatively little is known at this stage about the scale of implementation problems linked to the specific directives on VOC emissions or on discharge of dangerous substances into water. In principle, the technological problems are similar to those facing the large industrial facilities subject to the IPPC Directive, but on a much smaller economic scale. Though investment needs will be modest compared to those required under the IPPC Directive, the overall number of enterprises affected will be significant (all professional users of paints and organic solvents, e.g. dry cleaners, auto paint shop). The administrative capacity necessary to deal with these directives should not be underestimated.

In the rush to implement EU legislation on industrial pollution, it will be important to promote cleaner technology. Cleaner technology will often be both environmentally and economically attractive to end-of-pipe solutions, for big, medium-sized and small industries alike.

4.5 Nuclear Safety

A number of applicant countries have been developing nuclear energy programmes not always in alignment with the necessary EU standards. In Agenda 2000⁽¹⁸⁾, the Commission expressed its concern about nuclear safety in Central and Eastern Europe. In order to deal with unsafe reactors in the region, Agenda 2000 sets out the implementation of a number of nuclear safety programmes for some, and calls for the early closure of others, as outlined below:

- Where western-designed nuclear plants are in use (in Romania and Slovenia), developments should be monitored to ensure that operations comply with the appropriate safety standards. Technical assistance can be provided if necessary;
- where the safety of Soviet-designed nuclear power stations, which are in operation or under construction, can be upgraded to meet international safety standards, modernisation programmes should be fully implemented over a period of 7-10 years. (This applies to Dukovany and Temelin in the Czech Republic, Paks in Hungary, and certain units at Bohunice and Mochovce in Slovakia, and at Kozloduy in Bulgaria);
- the timetables agreed by the governments concerned, subject to certain conditions, for the closure of non-upgradeable units must be respected. (This applies to Bohunice in Slovakia, Ignalina in Lithuania and certain units at Kozloduy in Bulgaria).

In addition, the 1999 Cologne and Helsinki European Councils stressed the importance of high standards of nuclear safety in the context of the Union's enlargement and requested the Commission to examine carefully this sensitive area.

The EU position on nuclear safety in the applicant countries is that nuclear plants that, because of their basic design, cannot be brought up to western standards will have to be closed down as soon as possible. This position has strong Danish support, particularly as far as Ignalina in Lithuania is concerned, but also with respect to nuclear power plants in Slovakia (Bohunice) and Bulgaria (Kozloduy). The combined costs of safety upgrading for those reactors⁽¹⁹⁾ that can be upgraded is assessed to be in the order of EUR 2 billion. The costs for support to adequate storage of spent fuel, radioactive waste management, decontamination of uranium mining sites, and the

The closure of Ignalina nuclear power plant

As agreed in the Europe, an Agreement between the EU and Lithuania, the Lithuanian Parliament in August 2000 approved the National Energy Strategy, including the decision to close one of the Soviet RBMK reactors before 2005 and to announce at the latest in 2004, when the second can be closed. The EU is expecting that the second and last unit will be closed in 2009 – being four years younger than the first unit and with more extensive safety upgrades included. It is estimated that 250 MEUR will be needed to put the first reactor out of work. Ignalina currently provides 70% of the country's power, and therefore Lithuania is in need of international assistance to replace this capacity.⁽²¹⁾

decommissioning of retired or soon to be retired reactors, e.g., Ignalina is assessed to be an additional 1 billion EUR, and possibly more. ⁽²⁰⁾

The absence of detailed EU legislation on safety of nuclear energy installations means that these questions fall outside the traditional approximation process. The EU Commission is, however, currently developing generic and specific accession requirements for the accession countries with unsafe nuclear power plants. The current EU countries are expected to require – as a strict precondition in the final accession negotiations – that firm decisions have been taken on the fate of the unsafe plants. A key to the solution of this important question will be to establish alternative power supply at a recoverable cost.

It is important that future power supply structures provide for the introduction of environmentally friendly energy technologies. However, combined heat and power production, as well as renewable energy supply (biomass, geothermal, wind) are, for the time being, facing an uphill struggle in several countries because of overcapacity in the existing electricity supply systems and uncertainty concerning how the liberalised electricity market will influence the construction of new, environmentally friendly capacity.





4.6 Chemical Control

Chemical control is a cross-cutting area with links to the regulatory frameworks for water quality (release of dangerous substances into water), air quality, industrial pollution control and other sectors. The EU framework law on classification, labelling and packaging of dangerous substances dating back to 1967, is aimed at harmonisation of national laws so that the estimated 100,000 chemicals in use can circulate within the Internal Market, but with control over those posing particular hazards. The CEE countries lacked similar marketplace control during the socialist years. Today, several years into the task of approximation, there is still little information available on how many of the chemicals now in use in the CEE countries are "new" chemicals, e.g. not yet notified within the EU system and therefore in need of testing and assessment.

Approximation with the EU chemical requirements will require the CEE countries to develop new regulatory skills and tools, including the capacity to test chemicals according to EU methodologies and to assess risks posed by certain chemicals so as to determine whether additional controls are needed. If the proposed EU Strategy for a future Chemical Policy goes into effect, thousands of additional chemicals will undergo review and assessment, a burden which the CEE chemical authorities will be expected to share.

A particular problem is obsolete pesticides, abandoned after the breakup of communal farms and now gathered into stores, many of which are leaking and vulnerable to fires and other disasters leading to dispersion. Donor assistance for safeguarding and destroying these stores is still important.

Several international environmental conventions are significant for controlling adverse impacts from chemicals. The EU requirements on substances that deplete the ozone layer (ODS) implement the Montreal Protocol to the Vienna Convention by laying down rules for recovery, destruction and recycling of controlled substances. Implementation requires introduction of various mechanisms, including licensing of essential uses and measures to support the replacement of existing substances by non-OCS substances.

The POPs Convention aims to prevent and reduce and as far as possible eliminate emissions of 10 identified POP substances as well as of two identified POP by-products (12 in total). Transfer of know-how and capacity-building of central and local administrations will be needed, along with some investment to ensure environmentally sound management, disposal and destruction of POPs waste.

The so-called PIC (or Rotterdam) Convention requires exchange of information on certain banned or severely restricted pesticides and industrial chemicals in international trade. In the EU, the voluntary PIC procedure is implemented through a regulation concerning the export and import of certain dangerous chemicals, which covers all banned or severely restricted substances and hence has a broader reach. Costs for implementing this regulation will mainly derive from the establishment of the notification and information system supporting the import and export of dangerous chemicals.

4.7 Agriculture and Environment

The relevant EU legislation on environmental impact from agriculture is first and foremost the Nitrates Directive. Apart from requiring codes of good agricultural practices to be developed and applied nationwide, the important requirements in the directive are the monitoring of nitrate pollution, the identification of zones vulnerable to nitrate pollution, and the implementation of special action programmes in these zones.

At this time, nitrate pollution is less of a problem in Central and Eastern Europe than in the intensely farmed parts of the EU. Rates of fertiliser use are often on the low side because the agricultural sector has not yet recovered from the shocks of the economic transition including break-up of communal farms. But some intensive animal husbandry (pigs, cows) does exist throughout the region, which poses by and large the same problems known to many Member States.

The necessary remedies will be to ensure sufficient manure storage capacity to prevent manure spreading during the winter periods and to make sure that available manure is applied in sufficiently low quantities per hectare to allow proper uptake by crops. Improving manure storage facilities is the investment-intensive part of the nitrates directive. Required capacity may depend on whether the farm is in a nitrate-sensitive area or not, but particularly for the areas with "northern" winter conditions (by far the largest part of Central and Eastern Europe) storage capacity of at least 6 months seems necessary to meet "good agricultural practices".



Early estimates of investment needs for improved manure storage are around 4 billion EUR overall. As long as countries have not proceeded further on their identification of nitrate vulnerable areas, more accurate estimates will be difficult to provide.

It is urgent that the applicant countries make progress on the transposition and implementation of the Nitrates Directive since current experience proves that the EU is not likely to agree to transition periods in that respect. The EU already has funding available for structural improvement in the agricultural sector before accession through the SAPARD Programme (see next section).



4.8 Nature Conservation and Forests

Central and Eastern Europe has long been known for its extensive and highly valued natural areas and biodiversity resources. The importance of securing these for future generations has been recognised for a long time, even though the necessity to restore economic development has meant that nature conservation is considered a less urgent priority in most of the countries.

The Birds Directive and the Habitats Directive are not usually regarded as investment-heavy EU environment legislation. However, the measures needed to properly implement these requirements, including identification of areas to be protected and establishment of necessary restrictions in the use of these areas, will place a heavy administrative and financial burden on the authorities. Financial compensation to private owners who have regained title to land having environmental significance, is often necessary if restrictions need to be imposed in order to ensure the necessary protection. But at a time of heavy demand for public funds for investment in other areas, nature protection authorities are fighting to preserve already shrinking budgets for nature protection.

On the other hand, there is need for an accelerated implementation of the EC legislation in this field because regulations covering the ISPA and PHARE instruments requires examination of infrastructure projects in relation to sites of nature conservation importance, e.g. potential future Natura 2000 sites. The European Commission has notified the applicant countries that they cannot expect transition periods for the nature conservation legislation, in view of the fact that nature conservation measures are a process as much as an end result. This process must be given priority, primarily to prevent irreversible damage to valuable nature areas, but also in order to have relevant areas identified before expectations of increased land value will make it more difficult (or at least more expensive) to ensure the protective status.

In the biotechnology field, the EC legislation governing the deliberate release into the environment of genetically modified organisms (GMOs) puts forward a more efficient and transparent procedure for authorising the placing on the market of GMOs. Compulsory monitoring after GMOs have been placed on the market will require investment in human resources and in training as well as transfer of know-how to users and the public authorities, but in general, implementation consists mainly of indirect and overhead costs. The risk assessment associated with the release of GMOs will need to be based on a common methodology and a system of accredited laboratories to analyse data. The system of exchange of information contained in notifications, the establishment of registers for the purpose of recording information on genetic modifications in GMOs and on the location of GMOs will be the only direct costs.

4.9 Horizontal Legislation

The horizontal requirements among the EU environmental acquis cover access to environmental information as well as environmental impact assessment (EIA) of projects and strategic environmental assessment of plans and programmes (SEA). Although transposition of the EIA Directive is well advanced in most of the CEE accession countries implementation remains a challenge and is particularly important for the CEE accession countries, since EIA is a prerequisite for environmental infrastructure projects where EU financing is sought. Implementation of the EIA requirements will

require extensive capacity- and institutional building along with training of the respective public authorities and experience in public consultation procedures. In the same direction, communication and awareness strategies will be needed, targeting public officials and the public in general.

The 1998 Aarhus Convention (The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters), which came into effect on 30 October 2001, goes beyond the EU legislation on access to environmental information and public participation. The Aarhus Convention aims to ensure that everyone has access to environmental information and gives ordinary citizens a voice in decision-making that affects the environment. It also provides for judicial mechanisms for redress in the case of infringement of rights and for enforcement of the law to the public (individuals and non-governmental organisations).

Although not considered an investment-heavy instrument, it will require changes in the approach taken by the public authorities in diffusing information about the environment as well as institutional reforms, including the strengthening of regional and local authorities as implementing authorities, effective judicial mechanisms and enforcement procedures along with the setting up of data base systems.

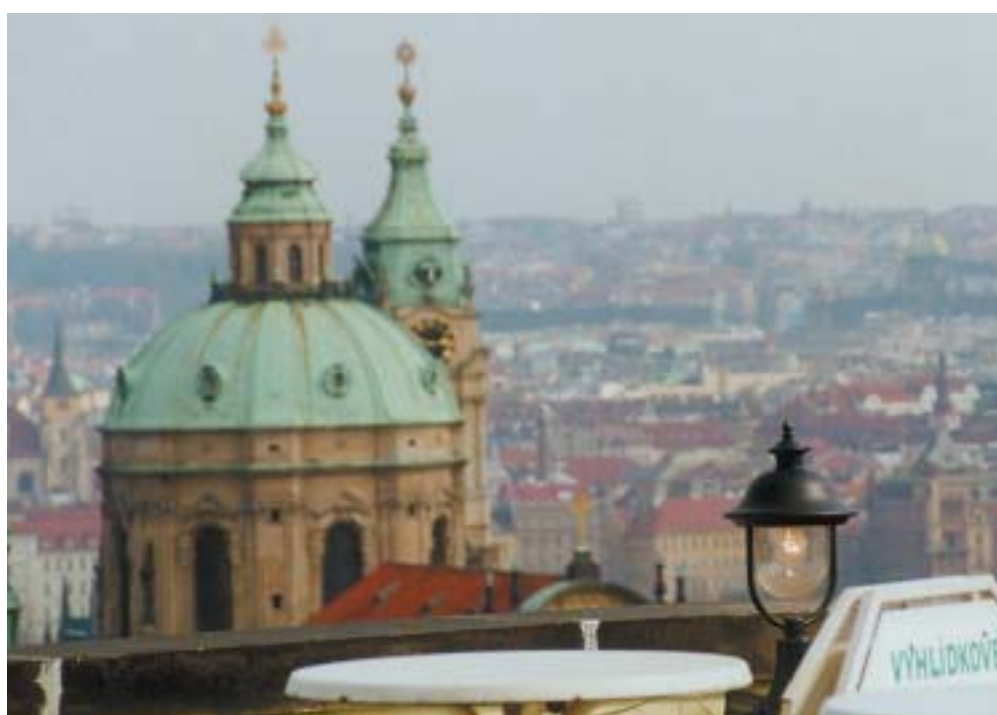


Table 4.4 Multilateral Conventions ratified by the EU

Multilateral Conventions ratified by the EU
International Conventions
<i>Air Quality</i>
<ul style="list-style-type: none"> • Vienna Convention for the Protection of the Ozone Layer & Montreal Protocol on Substances that Deplete the Ozone Layer
<ul style="list-style-type: none"> • United Nations Framework Convention on Climate Change
<i>Waste Management</i>
<ul style="list-style-type: none"> • Basel Convention on Transboundary Movements of Hazardous Waste
<i>Nature Protection</i>
<ul style="list-style-type: none"> • Convention on Biological Diversity
<ul style="list-style-type: none"> • Bonn Convention on Migratory Species
<i>Soil Erosion</i>
<ul style="list-style-type: none"> • United Nations Framework Convention to Combat Desertification
Regional Conventions
<i>Air Quality</i>
<ul style="list-style-type: none"> • Convention on Long-Range Transboundary Air Pollution + Protocols & amendments
<i>Water Quality</i>
<ul style="list-style-type: none"> • Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts, as amended
<ul style="list-style-type: none"> • Convention on the Protection of the Marine Environment of the Baltic Sea Area, as revised
<ul style="list-style-type: none"> • Convention on Cooperation for the Protection of the Danube
<ul style="list-style-type: none"> • Convention on the International Commission for the Protection of the Oder
<i>Nature Protection</i>
<ul style="list-style-type: none"> • Convention on the Conservation of European Wildlife and Natural Habitats
<i>Industrial Pollution Control</i>
<ul style="list-style-type: none"> • Convention on Transboundary Effects of Industrial Accidents

4.10 International Environmental Conventions

The CEE applicant countries are all parties to the global conventions on ozone layer protection (Montreal Protocol), transboundary movements of hazardous waste (Basel Convention), climate change and biodiversity. They are generally meeting their commitments under these agreements without major difficulties, and since the EU is also a party to the conventions, remaining bits and pieces will be covered when implementing the relevant pieces of EU legislation.

The applicant countries have been less successful in ratifying amendments to the different agreements (reinforcement of Montreal Protocol commitments, Basel Convention Ban Amendment). This delay appears to be due to overstretched administrations rather than to actual difficulties on the ground. Unfortunately, several industrialised countries that would be expected to be at the forefront to protect the environment globally are also delaying making commitments, which has led to a loss of momentum towards ratification of some important instruments. It is important that the Member States make a strong commitment to these international environmental instruments, in order to give a solid and united example to the applicant countries as well as to the countries in Southeast and Eastern Europe and in Central Asia.

The table below provides an overview of the multilateral environmental conventions ratified by the EU to date.

As far as regional agreements are concerned, a number of treaties will become quasi-EU agreements with all 10 candidate countries joining the EU. This is the case with the Helsinki Convention on the protection of the Baltic Sea (Russia to be the only non-EU party) and the Danube Convention (Yugoslavia and Croatia being non-EU parties). Also the Long Range Transport of Air Pollution and its

Table 4.5 Stage of play of selected multilateral environmental agreements (September 2000)⁽²³⁾

Convention	CBD		CITES		CMS		BASEL		OZONE		UNFCCC C		UNFCCC D		RAMSA R	
	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A
CEE Country	R	A	R	A	R	A	R	A	R	A	R	A	R	A	R	A
Bulgaria	X			X		X		X		X	X					X
The Czech Republic	X		X			X	X		X		X			X		X
Estonia	X			X				X		X	X					X
Hungary	X			X		X	X			X	X			X		X
Latvia	X			X		X		X		X	X					X
Lithuania	X							X		X	X					X
Poland	X		X			X	X			X	X					X
Romania	X			X		X		X		X	X			X		X
The Slovak Republic	X		X			X		X	X		X					X
Slovenia	X			X		X		X	X		X					X
European Union	X				X		X		X		X		X			

* R= Ratification, acceptance, approval or succession; A= Accession

associated protocols on individual instances (SO₂, NO_x, etc.) will have a heavy EU majority after the full enlargement, Russia and Ukraine being the only major emitters outside the EU.

In strict legal terms, these agreements require little from the applicant countries beyond what is already required in EU legislation. However, both on water pollution and on air pollution, the requirements of the conventions are not necessarily sufficient to guarantee the aimed-for environmental quality. This became particularly evident in recent negotiations over the EU acidification strategy.

It is desirable that the international conventions are seen in their broader context: as agreements to solve or reduce certain environmental problems in a process of international solidarity rather than a continuous fight about being committed to do as little as possible. This is particularly relevant to the energy sector where a number of policy options in favour of energy savings, rational use of energy and cleaner technology will allow the individual countries to contribute more to the objectives of international agreements than what is legally required for the time being.

A particular case is the 1998 UNECE Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (The Aarhus Convention).⁽²²⁾ It is important that the convention be not only ratified, but also fully implemented since the broadest possible public participation in policy formulation is among one of the strongest instruments available to ensure a high level of environmental protection.

4.11 Sector integration

EU accession negotiations have been largely dominated by the obligations set forth in the *acquis communautaire*. Since there is little EU legislation in place to date requiring Member States to meet specific goals with respect to integration of environment concerns into other sectors, sector integration has not been a major issue in negotiations of the Environment Chapter.

However, the integration of environmental considerations into other policy areas, especially economically important sectors such as energy, industry and agriculture, is a legal obligation under the Treaty of Amsterdam (Article 6). This obligation comes at a time where the inadequacy of environmental policy per se for tackling the underlying causes of environmental degradation has been recognized. The Gothenburg European Council invited the EU to further develop strategies for integrating environment into all relevant Community policy areas, taking into account relevant objectives set out in the 6th Environmental Action Programme and the EU Sustainable Development Strategy (SDS).

The situation in CEE accession countries is largely the same as in the EU countries, so that the success of integrating environmental concerns into other areas will be linked to efforts in the EU countries. Priorities for transport include, inter alia, elaboration of environmental targets in the transport sector, introduction of more energy-efficient technologies, alternative fuels and renewable sources and the continuation of the Transport and Environment Reporting Mechanism (TERM) under the European Environmental Agency/Commission. The priorities for energy as set out in the Industry/Energy Council Resolution include the promotion of efficient use of energy and internalisation of environmental and other external costs. Agriculture's priorities focus on monitoring and evaluation of environmental integration and sustainable

CHAPTER 4 THE ENVIRONMENTAL ISSUES AT STAKE IN THE ENLARGEMENT

development within the CAP, using a set of agri-environmental indicators and framework indicators relating to the economic and social dimensions of sustainable agriculture and rural development.

Some sectoral integration initiatives have already been taken by the accession countries – for example, the Baltic Agenda 21, which aims at promoting an environmentally sustainable development based on market economic principles in Estonia, Latvia, Lithuania, Poland and the Russian regions. However, though progress has been made towards integration of environmental concerns into other sectors, some weaknesses are still apparent, including failure to identify the full range of potential risks and environmental problems and lack of clear timetables for future development and implementation.

In spite of this, the accession countries still have good opportunities to pursue a higher degree of sustainability in their economic development. Support for public transport (urban and railways) – well developed in socialist times – should be sustained in order to counter the use of personal cars. New strategies in the energy sector are needed to foster the entry into the market of newcomers and to promote renewable energy sources while reexamining the future of the coal industry and coal-based power generation. Organic farming could be an option of an integrated strategy along with a scheme of assisting and recognizing the environmental stewardship role of some farmers.

It is important to figure out how to ensure that the substantial EU assistance to the CEE accession countries supports sectoral integration. The CEE accession countries should in any case focus on better policy integration, including a systematic and transparent review of the costs and effects of different options, so that different policies reinforce each other and environmental and social objectives are met at least economic cost.



ECONOMIC IMPLICATIONS OF THE ENLARGEMENT FOR THE ENVIRONMENT SECTOR

The amount of investment required to comply with the environmental acquis has been debated since the early 1990s. In 1997, a desk study carried out for DG Environment estimated the amount of environmental investment required in the CEE applicant countries to reach EU compliance at around 120 billion EUR⁽²⁴⁾.

Some of the recent efforts to estimate investment costs are summarised in the following table⁽²⁵⁾. These place the lower range of investment required at around 80 billion EUR.

However, as is clear from the individual citations, these estimates were prepared by a variety of experts, and the methodologies used to prepare the estimates for different countries and sectors have varied widely. These figures, most of which date from 1999 and 2000, must therefore be considered preliminary. The applicant countries have developed more detailed estimates throughout 2001, in the course of their negotiations of the Environment chapter. These negotiating figures are not yet public available. In any case, they are likely to continue change significantly as the applicant countries develop strategic investment strategies and as further experience is gathered.



Table 5.1: Estimated Environmental Financing Needs in CEE Candidate Countries (total plus selected directives)

Country	Total Cost 1997 Estimate MEURO	Recent Total Cost Estimate ⁽²⁶⁾ MEURO	Urban Waste Water ⁽²⁷⁾ MEURO	Waste Landfill/Recycling ⁽²⁸⁾ MEURO	Large Combustion Plants ⁽²⁹⁾ MEURO	IPPC ⁽³⁰⁾ MEURO
Bulgaria	15000	8610 ⁽³¹⁾	2056	2450	1627	3261
The Czech Republik	13400	6600-9400 ⁽³²⁾	1164	1120	1858	3725
Estonia	1500	4406 ⁽³³⁾	168	683	312	489
Hungary	13700	4118-10000 ⁽³⁴⁾	1678	430	878	1761
Latvia	1710	1480-2360 ⁽³⁵⁾	579	332	43	90
Lithuania	2380	1600 ⁽³⁶⁾	435	354	74	44
poland	35200	22100-42800 ⁽³⁷⁾	6414	3609	3456	6927
Romania	22000	22000 ⁽³⁸⁾	1385 (sewerage only)	2494	402	806
The Slovak Republik	5400	4809 ⁽³⁹⁾	499	870	796	1596
Slovenia	1840	2430 ⁽⁴⁰⁾	914 (sewerage only)	798	180	50
Total	121,500	78,153- 108,415	15,292	13,140	9626	18,749

For example, in November 2001, Poland's cost of meeting the EU urban waste water treatment requirements was estimated at 12,592 MEUR, and the cost of meeting the landfill and recycling obligations estimated at 8,306 MEUR.⁽⁴¹⁾ These estimates were double the figures developed in 1999. And Latvia's position paper for its negotiations of the Environment Chapter estimated the cost of complying with the IPPC requirements at 714 MEUR, of which 521 MEUR would be needed just for large combustion plants.⁽⁴³⁾

Given that the CEE applicant countries have a total population of 105 million, the investment requirement comes to approximated 800-1000 EUR per capita over ± 10 years. This is a significant expenditure for countries with 1998 GDP per capita at 4,517 EUR (Bulgaria) or 7,287 EUR (Poland).⁽⁴³⁾

By way of comparison, the average per capita GDP for the 15 EU Member States in 1998 was 24,597 EUR. The CEE applicant countries' average per capita GDP comes to less just 41% of this (35%, if Slovenia and the Czech Republic are excluded).

Clearly, the financing of environmental infrastructure in the applicant countries represents a major challenge for the CEE applicant countries. For assurance that the applicant countries are taking this obligation seriously, the Commission has asked applicant countries to prepare Directive-specific

Benefits of EU Environmental Compliance

Concern over the cost of investments to meet the EU environmental requirements and the lack of financing should be weighed against the benefits of compliance. A recent study for DG Environment looked at the long-term benefits that will accrue to the applicant countries from environmental compliance, e.g., reduced pressures on the environment through diminished pollution emissions and deposits.

The most striking benefits were estimated to come from implementing the air sector requirements – between 8 and 44 billion EUR a year by 2010. Benefits would accrue from reduced mortality, incidence of diseases, and damages to buildings and crops; and would arise primarily from lower emissions of particulates, SO₂ and NO_x, volatile organic compounds (VOCs) and ammonia.

In the water sector, benefits of EU compliance were estimated at between 5 to 14 billion EUR a year. For the waste management sector, benefits were estimated at between 0.6 to 8.7 billion EUR a year, with implementation of the Landfill Directive the largest contributor of benefits.

Aggregated benefits from compliance with the EU air, water, waste management and nature protection sectors were estimated at a value ranging between 12 and 69 billion EUR per year (note that reduced air pollution accounts for around half of the total benefits). This corresponded to between 80 and 410 EUR per capita annually.

Moreover, reductions in transboundary pollution were estimated to yield a benefit of approximately 6.5 billion EUR a year to Member States, with a further benefit of 9.5 billion EUR a year to other countries, notably Ukraine, Belarus and Russia. The study also found that acceleration of implementation would result in even higher total benefits, because earlier reductions in emissions leading to improvements in air, water and soil quality would enable benefits to start accruing earlier.

Implementation and Financing Plans (DSIFP), as a prerequisite for negotiation of any transition periods. The first step in preparing a DSIFP is to outline the steps required for full implementation, including how many investment projects are needed to achieve compliance and how much they will cost. This is not so difficult to do in a smaller country like Slovenia, but the logistics are quite different in a larger country like Poland where local governments must undertake the task of project identification. Since municipalities are generally responsible for delivery of a number of environment-related services such as water supply, waste water collection and treatment, and solid waste management, local governments need to be aware of the range of EU environmental requirements affecting them, so that they can carry out integrated municipal-level infrastructure planning.

If a municipality needs to invest in upgrading pipelines for delivering drinking water supply and collecting waste water, it may be able to save costs if one channel is dug and the two piping systems laid at the same time. It will need to figure out the annualised cost of the proposed investment, including the cost of repaying any loans required for financing, the costs of operation and maintenance (O & M), and so on. If it also needs to develop a new landfill or build a new waste water treatment plant, a municipality will need to set priorities and to schedule the construction of infrastructure as funds become available.

CHAPTER 5 ECONOMIC IMPLICATIONS OF THE ENLARGEMENT...

A municipality's short and long term priorities may differ from the national government's accession priorities. The availability of outside funding from the EU or other donors can also affect the setting of priorities.

Investment planning needs also to calculate how the costs of implementation will be financed. For a DSIFP, which needs to consider how to finance the aggregate costs of implementing a directive throughout the country, the investment planner needs to look at the overall supply of financing available.

This involves inter alia determining the sources of financing, (e.g. national/local public investment budgets, internal sources of grants/soft loans, external sources of grants/soft loans, loans through international financial institutions or commercial financing, etc.).

A related question, if part of the financing will be through loans, is the debt-carrying capacity of the borrower, such as a municipality. Most countries have legislation in place limiting the amount that individual municipalities can borrow, (e.g. loan payments only up to 50% of a municipality's annual budget). If a municipality has already borrowed up to its limit, it will need to wait until it has repaid some of its debt before it can borrow for building additional environmental infrastructure. Affordability may become an issue, making it difficult for a municipality to recover costs through, e.g. raising user fees.

SOURCES OF ENVIRONMENTAL FINANCING BEFORE AND AFTER ACCESSION

The CEE Candidate Countries have already received a wide range of environmental assistance from the European Union, bilateral donors such as Denmark, and the international financial institutions (IFIs) such as the EBRD and the World Bank. Most of the assistance in the early 1990s was so-called technical assistance, i.e. training workshops to acquaint civil servants with Western European environmental protection practices or support for developing the administrative capacity of environmental ministries. In the past few years, recognition of the importance of supporting public sector investment in environmental infrastructure has grown.

The Countries' own sources

From the beginning of the accession process, the EU has said that at least 90% of the cost of environmental investments needed for EU accession had to be borne from the countries' own sources.

However, as Figure 4.1 on page 10 of this report shows, the CEE applicant countries already expend on average twice the proportion of their GDP for environmental protection in comparison to the rates expended in EU Member States. So it is not immediately evident how they will find the additional resources.

Almost all of the CEE applicant countries have set in place specialised environmental funds to raise financing for environmental purposes. The funds are operating at national and/or local level and are typically based on systems of pollution fees and penalties.



Poland's system of environmental funds, established in 1989, has been especially effective, particularly for financing of municipal infrastructure such as waste water treatment and solid waste management facilities. The National Fund for Environmental Protection and Water Management and the related voivodship (regional), powiat (county) and gmina (municipal) environmental funds supply an estimated 40% of the financing for environmental protection in Poland.⁽⁴⁵⁾

The environmental funds in other CEE applicant countries have found it difficult to repeat Poland's success in generating large amounts of domestic capital, but have played other important roles in facilitating environmental investment, including support for project preparation and for management of donor-financed projects.

Lithuania's Environmental Financing Strategy

As part of its accession planning process, Lithuania's Ministry of Environment developed a detailed analysis and strategy for financing the water and waste management infrastructure needed to comply with the EU acquis. The Financing Strategy reviewed demand for financing based on detailed cost estimates for the investment-heavy Directives in terms of investment costs combined with annual operating and management (O&M) costs. It then considered the supply of financing from both domestic (e.g., general revenues, pollution charges, user fees, commercial capital) and foreign sources (bilateral and multilateral grants, IFI loans, foreign direct investment). The Financing Strategy then matched supply of financing with demand, while identifying potential gaps and analysing issues of affordability.

The Financing Strategy concluded that the major municipal waste and water requirements arising from EU accession could be fulfilled by 2015, if repayment of the portion of financing from loans is spread out over several years on the basis of user fees on water and waste services. Annualized costs were estimated at approximately 5% of GDP, but actual burdens may be lower to the extent that foreign grant financing reduces domestic costs.

The Financing Strategy noted, however, that municipalities might need to choose among competing investment needs, e.g., for schools or other public needs, which could diminish the amount of own source financing for environmental infrastructure.

Bilateral donors

Assistance from bilateral donors has continued to be important for the applicant countries' accession preparations in the environment sectors. Among the EU Member States, the Dutch, British, and German assistance programmes have been important sources of technical assistance, but less so for investment. The Swedish and Finnish assistance programmes have also provided important technical assistance – in the case of Finland, on implementation of the Espoo Convention. They have also provided investment support but primarily for the Baltic States (and those parts of the Russian Federation impacting the Baltic Sea).

For the eight CEE applicant countries targeted under the DANCEE programme, (Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Poland, Romania and Slovakia) Danish assistance has formed the largest source of bilateral funds. The DANCEE programme has provided at least 500 MEUR of financing over the past



decade – at least half of it for investment in infrastructure projects such as waste water treatment and waste management.

Non-EU donors such as Norway, Switzerland, Canada, Japan and the United States continue to be at presence in the region. In recent years, even the non-European donors have supported the process of EU accession by using the EU environmental acquis as the standard.

International financial institutions

The World Bank has been a major source of environmental financing in the applicant countries, but with the successful transition to market economies for many, the World Bank has started to shift its financing activities east to the less economically developed CIS. The Bank prides itself on its willingness to take on difficult sectors, e.g. a rural development credit scheme in Poland is helping the national government to support, inter alia, waste water treatment and solid waste management projects in rural areas of Poland.

The European Bank for Reconstruction and Development (EBRD) was established in 1991, specifically to assist the CEECs and the CIS in economic restructuring and in promoting private entrepreneurship. From the beginning, support for clean-up of environmental "hotspots" has been a priority. The EBRD has a specific programme to assist municipalities in financing environmental infrastructure, such as treatment. In 1998-99, it joined with the EU and other IFIs to mobilise 900 MEUR of financing for investment projects in transport and environment. For example, the Maritsa flue gas desulphurisation plant in Bulgaria was co-financed by Phare, the EIB and the EBRD. The ERDB is also administering a programme to finance the decommissioning of several nuclear plants.

The Nordic Investment Bank (NIB) grants loans for public and private sector environmental investments in the regions neighbouring the Nordic countries. The loans are aimed at reducing environmental degradation and cross-border pollution, especially in the Baltic Sea.

The Nordic Environmental Financing Corporation (NEFCO) facilitates implementation of environmentally beneficial projects that would reduce transboundary effects to the benefit of the Nordic region. The current project pipeline focuses on municipal water and waste water treatment in Estonia, Latvia, Lithuania, Poland, and Russia.

European Union

The EU is the largest donor for the CEE applicant countries. As of 2000, the EU assistance totals 3.1 billion EUR a year for all 10 applicant countries. Three programmes of assistance have been established for these countries:

- The Phare Programme (1,560 billion EUR/year);
- SAPARD (520 million EUR/year);
- ISPA (520 million EUR/year for environment infrastructure, 500 million EUR/year for transport infrastructure).

The European Commission has in the past two years taken steps to decentralise the administration of these assistance programmes, assigning important functions such as project preparation, tendering and contracting to the central government of each applicant country. This devolution of administrative functions to the countries themselves is seen as the first stage of building local capacity to successfully administer post-accession Structural Funds and agricultural support facilities.

The Phare Programme was initiated in 1989 as a programme to support Poland and Hungary in (reconstructing) their economies. It quickly expanded to cover all of the CEE countries except the CIS. In Agenda 2000, the EU shifted policies so the Phare Programme, – which had previously focused 90% of its funding on technical assistance, allocated 30% to technical assistance, including "twinning projects". The remaining 70% of Phare assistance is now allocated for investment, particularly aimed at supporting economic development in the more impoverished regions of each Applicant Country.

The Phare Programme today has an annual budget of 1,560 MEUR and comes under the responsibility of the Enlargement Directorate General. It focuses entirely on the priorities set forth by the Candidate Countries in the Accession Partnerships, taking into account the progress made in the yearly Regular Reports from the Commission. It finances institution-building measures across all sectors, primarily through the Twinning Instrument, a mechanism which supports the placement of pre-accession advisers (PAA) seconded from a Member State administration to work full-time in the corresponding ministry in the applicant country for at least one year.

Though twinning was launched in 1998, initial difficulties in implementation caused long delays before individual pre-accession advisers were placed into the applicant countries administrations. An assessment of the Twinning Instrument identified three major problems:⁽⁴⁶⁾

- (1) limited capacity of some applicant countries' administrations to absorb the support of the PAAs meant that some PAAs were underutilized;
- (2) lack of progress in some countries on public administration reform in general, (e.g. low salaries, lack of delegated decision-making, political interference and job insecurity) resulted in a poorly motivated and poorly performing civil service;
- (3) inadequate supply of high-quality PAAs because Member State administrations often see Twinning as an irrelevant diversion from more important domestic work.

In mid-2001, the programme had become more operative. In some applicant countries, twinning is regarded as a valued mechanism to acquire practical experience in administration of the EU requirements. The experience in other applicant countries has been less useful.

At least half of the 70% of the Phare budget allocated for investment support now supports investment in integrated regional development programmes in each CEE applicant country. These programmes are becoming a significant source of funding for environmental infrastructure investment in rural areas where economic development is needed and are regarded as precursors for post-accession Structural Funds.



SAPARD finances agricultural and rural development from its annual budget of 520 MEUR and comes under the responsibility of the Agriculture Directorate General. In its effort to decentralise the management of SAPARD, the Commission expects each applicant country to establish a national SAPARD administration. But the technicalities of administering the SAPARD assistance have yet to be overcome by a number of countries, including Poland and Romania.

As of November 2001, only Bulgaria and Estonia had succeeded in gaining the conferral of management of SAPARD aid.⁽⁴⁷⁾ This raises some doubt as to whether the 520 MEUR budgeted for 2000 will be fully utilized, since SAPARD regulations require this allocation to be spent before the end of 2002.

It is possible in theory to finance certain types of environmental measures through SAPARD, including environmental protection at farm-level, agricultural water resources management, forestry and land improvement. However, SAPARD does not appear to be sufficiently utilized for environment-related purposes at this point.

The ISPA programme has an annual budget of 1,040 MEUR split 50/50 between major environmental and transport infrastructure projects. It comes under the responsibility of the Regional Policy Directorate General and is seen as a pre-cursor to a post-accession Cohesion Fund for the CEECs. ISPA resources have been tentatively allocated among the 10 CEE applicant countries on a formula based on population, per capita GDP, and land surface area, as follows:

Country	Range by percent	Range by MEUR
Bulgaria	8 – 12%	41.6 – 62.4
The Czech Republic	5.5 – 8%	28.6 – 41.6
Estonia	2 – 3.5%	10.4 – 18.2
Hungary	7 – 10%	36.4 – 52
Lithuania	4 – 6%	28.8 – 31.2
Latvia	3.5 – 5.5%	18.2 – 28.6
Poland	30 – 37%	156 – 192
Romania	20 – 26%	104 – 135.2
Slovenia	1 – 2%	5.2 – 10.4
The Slovak Republic	3.5 – 5.5%	18.2 – 28.6

ISPA financing is given on a first-come, first-served basis, so if a country fails to prepare enough good infrastructure projects to qualify for its share of resources, another country may be able to get projects financed.

Some donors, including Denmark, have had close cooperation with ISPA in project preparation and project implementation in several CEE applicant countries, including some co-financing.

ISPA provides up to 75% co-financing, but only for environmental projects with a minimum budget of at least 5 MEUR. This threshold requirement has created difficulties for some of the smaller countries, e.g. the three Baltic States (Estonia, Latvia, Lithuania), that have already financed many of the major waste water treatment plants in line with HELCOM obligations and are seeking to group smaller projects together to qualify for ISPA projects. Though ISPA has said this may be allowed, in practice the only groups of projects that have been approved (as of July 2001) have been a cluster of 6 landfills in Bulgaria, and four regional waste management projects in Hungary.

ISPA is designed to be the precursor to the Structural Funds that will become available following entry of the applicant countries. However, even before the programme has finished, concerns have arisen about how the programme is functioning. On the Commission side, there are concerns about absorption of ISPA financing and the ability of countries to develop a strategy and pipeline of properly prepared projects. On the side of the applicant countries, there are concerns about the appropriateness and application of criteria, the lengthy project development and approval process, and the degree of flexibility needed to meet the varying conditions in specific applicant countries. It would be very useful for the Commission, the applicant countries and the Member States to examine ISPA with a view to identifying lessons learned that would improve the use of post accession structural funds in the field of environment.

Assistance to upgrade nuclear standards in the CEEC is provided mainly via the PHARE and TACIS funds, the EURATOM loan facility, and the Nuclear Safety Account (NSA), administered by the European Bank for Reconstruction and Development (EBRD). The NSA was set up in 1993 to address urgently needed upgrades of those nuclear reactors which were not covered by bilateral assistance funds, i.e. RBMK and VVER 440/230 types. See note 19 for a list of the types of reactors that are covered by EU programmes. Coordination between assistance programmes lies within the Nuclear Safety Assistance Coordination (NUSAC) whose Secretariat is hosted by the European Commission.

The European Investment Bank (EIB) is an increasingly important source of EU-generated financing for the applicant countries. Since 1990, the EIB has lent 11.5 billion EUR to various projects in the ten CEE applicant countries, for transport and communications, energy projects, industry, and environmental protection. Though only 108 MEUR was lent to environment-related projects during the 1990s, the EIB is now becoming more of a player in environmental financing in the applicant countries, mostly for construction of waste water treatment facilities, particularly in Poland and Hungary as co-financing for ISPA projects.

Sources of financing after accession

Upon accession, applicant countries are expected to still have a financing gap. The CEE applicant countries will need to generate investment financing from their own sources in order to complete the environmental investments necessary to achieve compliance by the end of the negotiated transition periods. As new Member States, they will also benefit from significantly increased financial assistance from the EU. But these two sources of financing are not expected to be sufficient.

The amount of pre-accession support provided by the EU at this point for environmental investment seems like a large amount, until it is compared to how much the EU gives on a per capita basis for environment-related projects each year to Member States eligible for Cohesion Funds and Structural Funds.

ISPA, for instance, provides 520 MEUR each year for financing of CEE applicant country environmental infrastructure, which comes to 5 EUR per capita. By way of comparison, during the time period 1993-1999, the EU through its Cohesion Fund gave approx. 1,404 MEUR a year to Spain, Greece, Portugal and Ireland just for environmental infrastructure, which comes to 22 EUR per capita ⁽⁴⁸⁾.

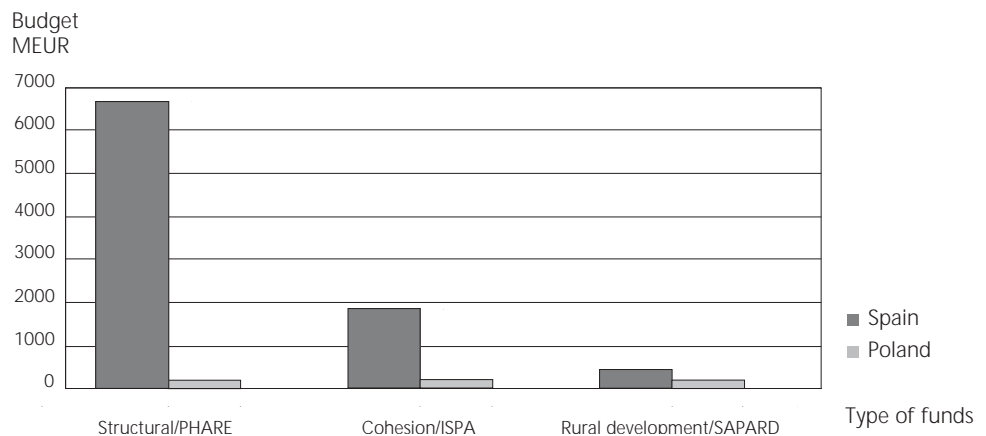


If one compares a CEE applicant country to a Cohesion Fund country with approximately the same population, the per capita disparity is much greater. For example, both Spain and Poland have populations of around 40 million. Whereas Poland will receive between 156-192 MEUR per capita a year through ISPA, Spain received between 842 and 892 MEUR per capita a year for environment.

Similarly, both Greece and Portugal have populations of around 10 million, also the size of Hungary and the Czech Republic. This year Hungary will get between 36 and 52 MEUR from ISPA, and the Czech Republic between 29 and 42 MEUR. In the time period 1993-1999, Greece and Portugal each got between 225 and 253 MEUR a year for environment – at least six times as much per capita.

Even more money is paid out by the EU through the Structural Funds, which have a budget of 213 billion EUR for the period of 2000-2006, or around 35.5 billion EUR per year. The Structural funds target financial assistance under three Objectives (93% of the budget) and four Community Initiatives (5.35% of the budget). Objective 1 covers development and structural adjustment of regions whose development is lagging behind (135.9 billion EUR). Objective 2 covers economic and social conversion of areas facing structural difficulties (22.5 EUR billion). Objective 3 covers adaptation and modernisation of national policies and systems of education, training and employment (24.05 billion EUR). The four Community Initiatives have a budget of 10.44 billion EUR.

Figure 6.1: Comparison of annual allocations of EU funds for Poland (non-Member State) and Spain (Member State) 2000-2006



Phare, the equivalent EU programme for the CEE countries, has a total budget of 6.24 billion EUR for the same period. Phare aims to devote about half of the investment element (half of 70% of the whole, or approx. 350 MEUR a year) to economic and social cohesion. Nonetheless, its entire budget for the applicant countries represents less than 10% of the per capita support for the Objective 1 regions within the Union.

Commission sources report that the policy position of the past – that 90% of the environmental investment would need to come from the Candidate Countries themselves – now appears to be crumbling. There is political pressure to finish negotiations of the Environment Chapter for the leading accession applicants, even if they have not yet adequately documented how they will meet the EU requirements at the end of their transition period. DG Regional Policy officials are now reportedly working on policy documents to propose significantly increased post-accession funding through new Cohesion and Structural Fund-like instruments.

CHAPTER 7

THE POLICY DILEMMAS

From the beginning of the current wave of the enlargement, one of the primary challenges has been the high cost of achieving compliance with the EU environmental standards. The risk is that the to succeed at the enlargement may undermine the pressure on the CEE countries to meet the environmental standards. The implications are two fold:

- (1) relaxing the environmental precondition will reduce the incentive in the accession countries to invest in environmental infrastructure and delay environmental clean-up in the CEE;
- (2) the EU will end up paying a much larger share of the cost of environmental infrastructure in the CEE than previously expected.

It will be important to keep the right balance in these areas in order to provide a positive example for the CIS countries. Most of the countries in the CIS are experiencing not only a profound economic contraction, but rapidly deteriorating environmental infrastructure, including water supply and general sanitation. The health impacts are leading to higher mortality rates and lower life expectancy rates. The reduced public budgets have left little funding for environmental investments in these countries. In particular, there is significant donor fatigue. Moreover, the commitment of donors tends to wane for those countries where there is not an immediate geopolitical interest. There has been a great difference, for example, between the resources provided to the three Baltic States (and the gains they have made) to that provided to the countries of the Caucasus.

Most of the countries in the CIS have signed Partnership and Cooperation Agreements (PCAs) with the EU committing them to harmonisation with the EU *acquis* over time, including the environmental obligations. At the same time, the EAP Task Force convened within the "Environment for Europe" has focused its attention on the CIS. Nonetheless, the pace of legal and economic reform is slow and it is difficult to see results. It is the CIS countries that may be most in need of the discipline and momentum of a drive for EU accession. A diminution in the emphasis on the environment during the enlargement process will send these countries the wrong message.

There is another risk. Upon accession, the new Member States from Central and Eastern Europe will also have the rights of EU membership, including to help set future EU environmental policy and to enact new environmental legislation. The signals given to the CEE applicant countries now and in the remaining period before the enlargement will be read not only by their Ministries of Environment, but by Ministries of Finance, Transport, Energy, Agriculture, Economic Development etc. If the signals given by the EU are that in the end environmental protection is not all that important, environmental protection may become a lower priority on the CEE political agenda.

That could have a negative impact on the EU constitutional commitment of maintaining a high level of environmental protection. It will be important in the remaining period for Member State governments and citizens to make sure that the enlargement moves ahead, but not at the expense of relaxing the pressure for the CEE countries to achieve compliance with the EU standards.

The applicant countries are well aware that the Member States also do not always follow the EU rules with respect to the environment. Recent moves by the Environment Commissioner to take steps to

press for better compliance on the part of current Member States need to be sustained, so that the applicant countries get the message that compliance matters and will be enforced.

It is a fact of public policy that some issues rise to the top of the agenda for a period and then are replaced by others. During the time of priority, very big advances can be made and this may be the case in the environment. There is some evidence that political support for environmental measures is on the slide. The good news is that there are now substantial legal and market mechanisms in place at EU level which protect the environment, including EIA, environmental management and auditing systems, public information disclosure requirements etc., and these can be used effectively to improve environmental protection.

The process of enlargement extends the EU legal and market mechanisms in place for environmental protection to the applicant countries and, through the Partnership and Cooperation Agreements and the Stabilisation and Association Agreements, to the aspiring applicant countries of South East Europe, Eastern Europe and Central Asia. It is a process that on the whole will benefit the environment.



CHAPTER 7 POLICY DILEMMAS



LIST OF ABBREVIATIONS AND ACRONYMS

BASEL	Basel Convention on Transboundary Movements of Hazardous Waste
CC	Candidate Countries
CBD	Convention on Biological Diversity
CEE	Central and Eastern Europe
CEEC	Central and Eastern European Countries
CEPS	Centre for European Policy Studies
CIS	Commonwealth of Independent States
CITES	Convention on International Trade in Endangered Species
CMS	Bonn Convention on Migratory Species
DANCEE	Danish Cooperation on Environment in Eastern Europe (DEPA programme)
DEPA	Danish Environmental Protection Agency
DG	Directorate General (Service of the European Commission)
DKK	Danish kroner
DSIFP	Directive Specific Implementation and Financial Plans
EBRD	European Bank for Reconstruction and Development
EEA	European Economic Area
EIA	Environmental Impact Assessment
EIB	European Investment Bank
EU	European Union
EUR	Euro
EURATOM	European Atomic Energy Community
GDP	Gross Domestic Product
HELCOM	Helsinki Commission (Baltic Marine Environment Protection Commission)
IAEA	International Atomic Energy Agency
IFIs	International Financial Institutions
IPPC	Integrated Pollution Prevention and Control
ISPA	Instrument for Structural Policies for Pre-Accession
JRC	Joint Research Centre
LCP	Large Combustion Plans
LIFE	L'Instrument Financier pour l'Environnement (Financial Instrument for the Environment)
MEUR	Million Euro
NEFCO	Nordic Environmental Financing Corporation
NGO	Non-Governmental Organisation
NIB	Nordic Investment Bank
NO_x	Nitrogen Oxides
NSA	Nuclear Safety Account
NUSAC	Nuclear Safety Assistance Coordination
OECD	Organisation for Economic Cooperation and Development
O & M	Operation and Maintenance
OZONE	Vienna Convention for the Protection of the Ozone Layer & Montreal Protocol on Substances that Deplete the Ozone Layer

CHAPTER 7 POLICY DILEMMAS

PAA	Pre-Accession Advisers
PCAs	Partnership and Co-operation Agreements
PCBs	Polychlorinated Biphenyls
PCTs	Polychlorinated Terphenyls
PHARE	Poland and Hungary: Action for the Restructuring of the Economy
RAMSAR	Convention on Wetlands of International Importance especially as Waterfowl Habitat
REC	Regional Environmental Centre
SAA	Stabilisation and Association Agreements
SO₂	Sulphur Dioxide
SAPARD	Special Accession Programme for Agriculture and Rural Development
TACIS	Technical Assistance Common Wealth of Independent States
UK	United Kingdom
UNECE	United Nations Economic Commission for Europe
UNFCCC	United Nations Framework Convention on Climate Change
UNFCCD	United Nations Framework Convention to Combat Desertification
VOCs	Volatile Organic Compounds

NOTES

(1) *Miljø- og Energiministeriet/Miljøstyrelsen. EUs udvildelse mod Øst – miljømæssige perspektiver: Hovedrapport (Copenhagen, 1997).*

(2) *The European Council at Nice (December 2000) confirmed that the enlargement process is irreversible. Negotiations should be completed by the end of 2002 for those applicant countries that are ready and they are to be admitted in time to take part in the 2004 European Parliament elections. The Gothenburg European Council (15-16 June 2001) iterated the above-mentioned dates. For more information, see Presidency Conclusions, SN 2001/01 REV 1.*

(3) *"Black triangle becoming green again", ENDS Daily, 16 May 2001, reporting that in the period 1989-1999, SO₂ emissions plummeted by 92%, NO_x by 80%, and particulates by 96%.*

(4) *In May 2001, for example, fears that Spain would lose its share from the regional aid budget once accession took place prompted Madrid to block a deal on free movement of workers from applicant countries. Spain finally lifted its objections before the Gothenburg European Council, but pressures might re-ignite at a later stage.*

(5) *An SAA was signed between the EC and the Former Yugoslav Republic of Macedonia on 26 March 2001. The SAA with Croatia was signed on 29 October 2001.*

(6) *DG Environment has supported Ministries of Environment of the applicant countries via a number of guidance documents, training and concrete assistance projects. More information can be found on the DG Environment website, <http://europa.eu.int/comm/environment/enlarg/home.htm>.*

(7) *The Commission Communication on Implementing Community Environmental Law (COM(96) 500 final) defines "transposition" as "any legislative, regulatory or administrative binding measure taken by any competent*

authority of a Member State in order to incorporate into the national legal order the obligations, rights and duties enshrined in Community environmental directives. "

(8) *Commission Communication on the Challenge of Environmental Financing in the Candidate Countries, COM(2001) 304 final, 8 July 2001, p. 4.*

(9) *"Environment targets for applicant states end up as an exercise in reality", European Voice, 7-13 June 2001, p. 16.*

(10) *Cf. the World Bank reports on environmental approximation in Poland and Bulgaria, and a recent report from a working party of CEPS (Center for European Policy Studies), a Brussels-based think tank on European policy issues.*

(11) *Ulf Johansson. "Environmental protection expenditure in Europe." EUROSTAT Statistics in focus (Theme 8-7/2001).*

(12) *See Council Directive 91/271/EEC of 21 May 1991 concerning urban waste water treatment (as amended by Commission Directive 98/15/EC)*

(13) *From Technical Report on Enlargement, RIVM Report 481505022, November 2001.*

This report is part of the Study on European Environmental Priorities, available at: <http://europa.eu.int/comm/environment/enveco/priority-study/index.htm>

(14) *Data extracted from EUROSTAT, 1998-1999 statistics on final energy consumption in the Candidate Countries and the EU. Information available at: http://europa.eu.int/comm/energy_transport/etif/energy_general_overview/final_consumption.html*

(15) *Miljø- og Energiministeriet/Miljøstyrelsen. EUs udvildelse mod Øst – miljømæssige perspektiver: Hovedrapport (Copenhagen, 1997).*

(16) From *Technical Report on Enlargement*, RIVM November 2001.

(17) From *Technical Report of Enlargement*, RIVM, November 2001.

(18) *Agenda 2000* indicates that the problem of nuclear safety in some applicant countries causes serious concern to the EU, even independently of enlargement, and should urgently and effectively be addressed. In addition, the solution is not simply to close down obsolete reactors, as they do not all pose the same risk, and the cost of obtaining alternative energy supplies would be extremely high. Cf. *Agenda 2000, The Challenge of Enlargement*, July 1997, Vol. II.

(19) These costs refer to VVER 440/213 and VVER 1000/320 reactors. The VVER 440/213 is an old model of pressurised water reactors lacking reactor containment. The costs of safety upgrading for these reactors are estimated between ECU 75 and 200 million per reactor, depending on the circumstances. The VVER 1000/320 model has reactor containment and its overall safety design is much closer to Western safety standards. However, some upgrading is necessary and the costs for upgrading one VVER 1000/320 are estimated between ECU 100 and 150 million.

(20) Data extracted from *Briefing Note 40, Nuclear Safety in the Applicant Countries of Central and Eastern Europe*, European Parliament, March 1999.

(21) Extracted from *European Voice*, by David Cronin. Issue 30 July 2001, page 6.

(22) The Aarhus Convention has been ratified by Albania, Armenia, Azerbaijan, Belarus, Denmark, Estonia, Georgia, Hungary, Italy, Kazakhstan, Kyrgyzstan, the Republic of Moldova, Romania, the former Yugoslav Republic of Macedonia, Tajikistan, Turkmenistan, and

Ukraine. The Convention came into effect on 30 October 2001.

(23) Source: *Europe "Agreeing"*, 2000 Report on the Status and Implementation of Multilateral Environmental Agreements in the European Region (REC, September 2000).

(24) EDC (1997). *Compliance Costing for Approximation of EU Environmental Legislation in the CEEC* (available on the DG Environment website; see endnote 8 above).

(25) From *Commission Communication on the Challenge of Environmental Financing in the Candidate Countries*, COM (2001) 304 final, 8 July 2001.

(26) From *Commission Communication on the Challenge of Environmental Financing in the Candidate Countries*, COM (2001) 304 final, 8 July 2001.

(27) From *Technical Report on Enlargement*, RIVM Report 481505022, November 2000

(28) *Ibid.*

(29) *Ibid.*

(30) *Ibid.*

(31) *Environmental Resources Management (2000). Development of Implementation Strategies for Approximation in Environment Final Reports of Mini-Projects March 2000 (for the Phare DISAE Facility).*

(32) 6,600-9,000: *The World Bank (1999) Czech Republic. Toward EU Accession*. Washington DC. 9,400: RIVM, EFTEC, NTUA, IIASA (1999) *European Environmental Priorities: an Integrated Economic and Environmental Assessment*.

(33) *Estonian Ministry of Environment, July 2000.*

(34) 4,118-9,318: *The World Bank (1999) Hungary. On the Road to the European Union. Washington DC. 10,000: Hungarian Ministry of Environment, July 2000.*

(35) 1,480-2,360: *Latvian Ministry of Environment, July 2000. 1,505-1,942: Latvia Regular Report (1999).*

(36) RIVM, EFTEC, NTUA, IIASA. (1999) *European Environmental Priorities: An Integrated Economic & Environmental Assessment.*

(37) 22,100-42,800: *The World Bank (2000) Poland Towards EU Accession. Washington DC. 24,900: RIVM, EFTEC, NTUA, IIASA. (1999) European Environmental Priorities: an Integrated Economic and Environmental Assessment.*

(38) *Romanian Ministry of Waters, Forests and Environmental Protection, (2000) National Plan for Environment ISPA Implementation.*

(38) *Romanian Ministry of Waters, Forests and Environmental Protection, (2000) National Plan for Environment ISPA Implementation.*

(39) *Slovak government (2000) National Programme for the Adoption of the Acquis.*

(40) *Slovenian government (1999) National Programme for the Adoption of the Acquis.*

(41) *Communication from the Polish Ministry of Environment, November 2001*

(42) *Addendum to Position Paper of The Republic of Latvia, Chapter 22: "Environmental Protection".*

(43) *"Per capita GDP in 41 out of 53 regions below 50% of the EU average in 1998" (EUROSTAT News Release No. 31/2001, 15 March 2001).*

(44) *Data extracted from The Benefits of Compliance*

with the Environmental Acquis for the Candidate Countries (ECOTEC, EFTEC, IEEP, Metroeconomica, TME & Candidate Country Experts, 2001).

(46) *Report on an Assessment of the Twinning Instrument under Phare (July 2000), available on European Commission/DG Enlargement website.*

(47) *"Pre-accession farm aid for Bulgaria: Go-ahead for payments for 53 million SAPARD-programme", RAPID press release (Europa website), Brussels, 15 May 2001. "Pre-accession farm aid for Estonia: Go-ahead for payments for 12.1 million SAPARD-programme", RAPID press release (Europa website), Brussels, 19 June 2001.*

(48) *The CEE applicant countries have a total population of 105 million, while the four Cohesion Fund countries have a total population of just 64 million.*

FURTHER INFORMATION ON THE DANISH ENVIRONMENTAL ASSISTANCE TO EASTERN EUROPE:

DANCEE releases successively various types of publications on the Danish environmental aid to Eastern Europe. Each type has its own colour.

DANCEE STRATEGY

" Danish Strategy for Environmental Assistance to Eastern Europe 2001 -2006"
Describes DANCEE's general strategy up to year 2006. Danish and English. For free.

ANNUAL REPORT

Contains a description of all projects launched and initiatives taken in connection with the Danish environmental assistance to Eastern Europe for the actual year.
For free.

COUNTRY PROGRAMME

DANCEE's strategy and priorities in the individual recipient countries are described.
Country programmes are planned in co-operation with the recipient country. English and the recipient country's language. For free.

COUNTRY BOOK

The country book describes the Danish environmental aid in each recipient country. It contains among others, description of the aid's progress and the environmental effects. It reviews typical projects within the different field sectors. English and recipient country's language. For free.

COUNTRY PAMPHLET

A brief and popular version of the country book which, with focus on concrete projects, explains the Danish environmental aid to the recipient country. English and recipient country's language. For free.

THEMATIC REPORT

Technically orientated report dealing with subjects of specific importance to the environmental aid, e.g. wastewater treatment or control instruments. Danish and English.

PROJECT PAMPHLET

Describes a specific environmental project and is released typically in connection with the opening of the project. English and recipient country's language. For free.

The publications are available at:
Miljøbutikken (The Danish Ministry of the Environment outlet)
Læderstræde 1-3
1201 Kbh K
Tel.: 33 95 40 00
Fax: 33 92 76 90
DANCEE on the Internet: www.mst.dk/dancee

The thematic report describes the environmental challenges related to the ongoing and future enlargement of EU. The state of the environment and related economic gaps in the sectors are presented for each applicant country. Economic aspects before and after the enlargement are presented and political issues are highlighted.

DANCEE PUBLICATIONS:

THEMATIC REPORT

DANCEE STRATEGY

ANNUAL REPORT

COUNTRY PROGRAMME

COUNTRY BOOK

COUNTRY PAMPHLET

PROJECT PAMPHLET

DANCEE

Danish Cooperation for
Environment in Eastern Europe

Miljøstyrelsen
Strandgade 29
DK-1401 Copenhagen K
T: +45 32 66 01 00
www.mst.dk

Ministry of the Environment

