

# Implications of EEA/EU enlargement for state-of-the-environment reporting in the EU and EEA Member States

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# 1. Introduction

## 1.1. Background

The enlargement of the European Union from 15 to 28 Member States over the next decade has been described as the greatest task facing this generation of Europeans.

Part of this process is the enlargement of the membership of the European Environment Agency (EEA). Already during 2002, the European Environment Agency has seen its membership extended with the accession countries in central and eastern Europe, Malta and Cyprus. Turkey is expected to join the EEA soon.

The enlarged geographical area to be covered will bring about changes in its reporting on the state of the environment, one of the core tasks of the EEA. But also for the member countries, the political context of the enlargement process will redirect topics and approaches for state-of-the-environment reporting.

State-of-the-environment reporters from the EEA and the EEA member countries have conducted an inventory of possible implications of the enlargement process for their work. This report reflects their opinions, which they would like to share with the wider community involved in or interested in state-of-the-environment reporting. The conclusions in this report are expected to give a steer to work programmes and reporting plans in the region.

Focusing primarily on issues associated with 10 countries in central and eastern Europe, this report deals with:

- a description of environmental issues in the accession countries (ACs);
- the enlargement process in relation to environmental issues;
- the consequences for EEA reporting of the new policy context, the larger geographic area and the increasing number of Member States; and,
- the consequences of enlargement for SoE (state-of-the-environment) reporting in the ACs.

Besides a literature review, the report is based on presentations and discussions at the seventh and eighth meetings of the EEA Expert Group on SoE Guidelines and Reporting held in Copenhagen on 23 March 2001 and in Brussels on 11 to 12 October 2001.

## 1.2. Enlargement

The enlargement process is very important for the EEA: changes in the political context and geographical scope will bring about changes in the EEA's environmental reporting. The enlargement process is important for the ACs because of the change in policy frameworks under which they are reporting, while it will probably mean less for the current EU members.

The environmental aspects of enlargement are many:

- The ACs share many similar problems to the EU, such as air and water pollution. However, the lower economic level, and the economy being partly dominated by heavy industry, make it more difficult for the ACs to cope with such environmental issues as acidification and point source discharges to water that have been nearly solved in many western countries.
- The environmental problems in the ACs are mainly related to inefficient energy and production systems. One of the assets of the ACs, however, is a sizeable amount of comparatively well-preserved ecosystems and natural areas.
- After the ACs join the EU, accelerated growth of their economies is expected. This will probably result in tremendous growth in consumption, increase in the use of energy and natural resources, and greater waste production: all activities which will put greater pressures on the environment. The ACs face the challenge to ensure that they do not repeat the failures of western countries.

The ACs have already started to integrate EU environmental standards into national legislation. In this context, a time lag can be expected before full compliance with EU environmental policies is achieved. The environmental situation will equally be affected by the adoption of EU policies such as the common agricultural policy, Structural Funds and trans-European networks (TENs).

Both the EU-15 and the ACs are undergoing transition to sustainable development. The process of implementing national and EU sustainable development strategies (CEC 2001/264) will have a great effect on environmental and sectoral policies. The general attention to sustainable development in policy-making will affect SoE reporting as well.

### 1.3. Environmental and natural resource issues in the accession countries

Most of the environmental problems in the east and the west are similar. However, due to particular circumstances, there are a few problems that are specific to ACs, such as hot-spot industrial areas, potential hazards associated with Soviet-era nuclear plants, and large-scale soil pollution related to military bases. The environmental problems in the ACs are mainly related to inefficient energy and production systems, in particular within the energy, industrial and agricultural sectors.

#### Energy

AC energy consumption per unit of GDP is considerably higher than the EU average. This is a consequence of the focus on energy-intensive industries and formerly high-subsidised energy prices. Many countries rely on low quality, highly polluting energy sources (e.g. coal, nuclear power) which, together with ineffective power plants, result in massive pollution levels. The economic recession during the transition markedly reduced energy consumption and, during the 1990s, resulted in a shift in the fuel types used, away from the highly polluting coal (Figure 1). Therefore, a marked drop in pollution has been seen in most countries. In the late 1990s the energy consumption

per unit of GDP was still considerably higher than the EU average. One of the reasons for this is that energy prices in the ACs were below world market levels due to regulation and subsidies.

#### Industry

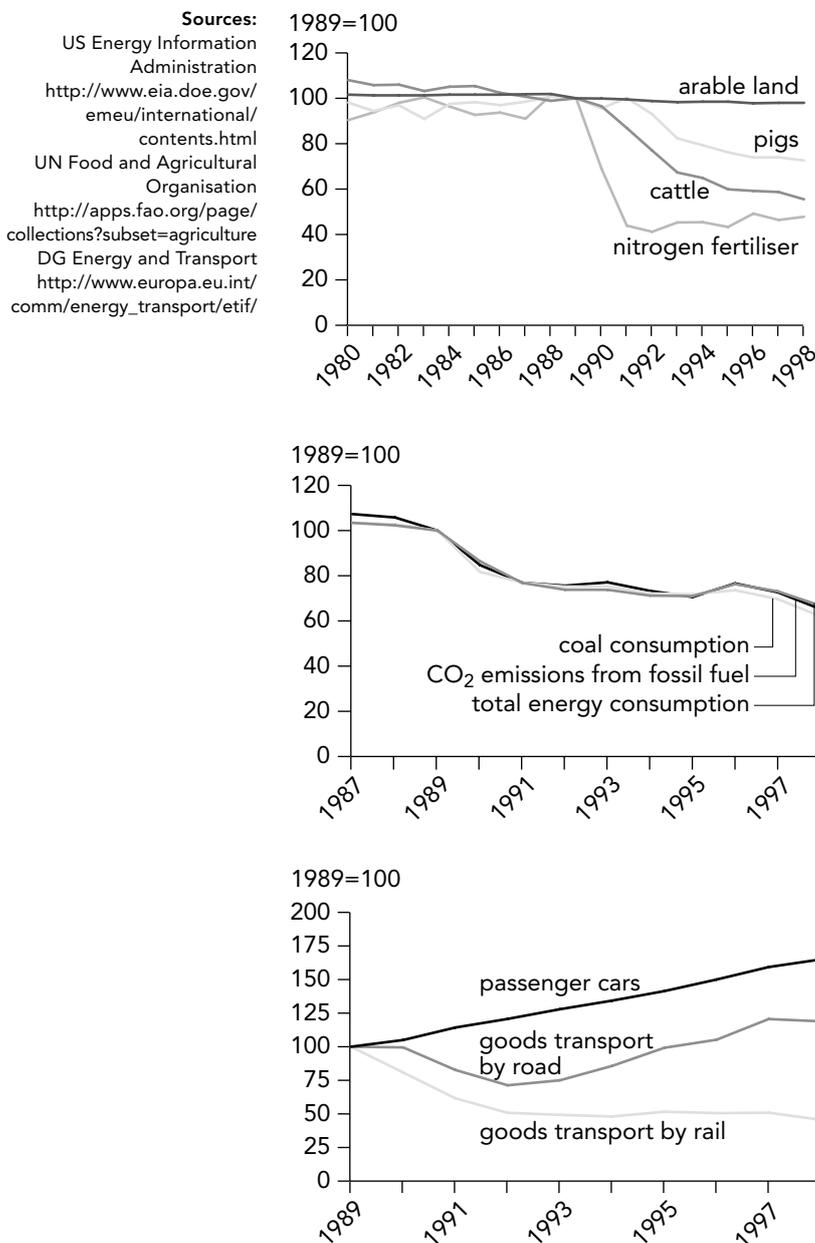
In general, industries in central and eastern European countries (CEECs) generate high pollution levels. Some areas in the region have had high concentration of heavy industries such as iron and steel. Most industrial enterprises used outdated and highly polluting production methods. Enterprise management often paid little attention to economic efficiency and, in many enterprises, plant maintenance was neglected. All these factors exacerbated pollution levels. All countries experienced a fall in industrial output in the first half of the 1990s. Some of these countries, however, started to recover their industrial outputs around 1994. Today, heavy industry, including the chemical industry and metallurgy, accounts for a significantly smaller portion of the industrial output compared to the late 1980s. The lower industrial outputs have reduced emissions. More importantly, the industrial restructuring and modernisation away from inefficient production practices and old, highly polluting technologies have resulted in improved environmental performance.

#### Agriculture

In the pre-transition period, large State-owned farms, mainly intensive livestock farms, based on low-priced subsidised inputs, resulted in severe environmental problems. However, in several countries small-scale farming using traditional production methods was important and has preserved wildlife, traditional landscapes and the rural economy vis-à-vis intensive western agricultural practices. During transition, the countries dramatically reduced high farming subsidies, including those of agricultural chemicals. This resulted in marked reductions in inputs of fertilisers and pesticides (Figure 1). The milk and beef sectors have been significantly reduced since 1990. Cattle livestock decreased by half and the number of pigs reduced by one third (Figure 1). Due to reduced inputs of agricultural chemicals and reduced livestock density, the negative

Figure 1.

Main trends in primary sectors in selected ACs, (average for Poland, Hungary, Romania and Bulgaria).



influence of agriculture on the environment decreased remarkably

### Transport

Between 1990 and 1998, car ownership increased by more than 60 % (Figure 1). Freight transport shifted from predominantly rail to road transport.

### Conserving high-value nature and biodiversity

The ACs have large areas of well-preserved ecosystems and natural areas with a large variety of fauna and flora, including many protected species. One reason why these areas were preserved, was tougher State control in the past. Another reason is the relative lack of resources for farming subsidies in comparison to those in the EU and many areas of low-input farming. Countries have protected a significant portion of their territories as parks or other types of preserved areas. If an unreformed EU common agricultural policy (CAP) is applied indiscriminately, causing a wave of farm consolidation and rural unemployment, the growing intensity of farming will pollute the ground and surface waters and reduce the biological and landscape diversity. Similar issues relate to other sectors, such as forestry.

### Other issues

Among the other important issues that ACs have to address are special problems such as oil shale and nuclear energy, cross-border issues, and the challenges of developing national sustainable development policies.

Table 1.

Estimated environmental financing needs (total cost) in candidate countries, million EUR

	BG	CY	CZ	EE	HU	LV	LT	PL	RO	SK	SI	Total
Estimate 1997	15000	1264	13400	1500	13700	1710	2380	35200	22000	5400	1840	122618-122764
Recent figures	1118-8610	1086	6600-9400	4406	4118-10000	1480-2360	1600	22100-42800	22000	4809	2430	79260-110001

Source: CEC 2001/304.

#### 1.4. The accession process and environmental *acquis communautaire*

A total of 10 CEECs are now on track for accession to the European Union <sup>(1)</sup>. Environmental issues and policies are expected to pose particular problems for candidate countries in this regard because of the extent of the EU environmental requirements and the need for significant investment in environmental infrastructure in order to achieve compliance (Table 1).

On the other hand the study on 'The benefits of compliance with the environmental *acquis* for the candidate countries' shows that the ACs will gain significant benefits in terms of reduced air and water pollution, safer and more efficient waste management, and an improved public health record <sup>(2)</sup>.

A major bottleneck in complying with EU environmental directives, as suggested by a recent Environment DG study <sup>(3)</sup>, is insufficient administrative capacities within the accession countries. A general problem is the full-scale integration of permitting and inspection functions into environmental administration (especially

for implementing the IPPC and the water framework directives), with monitoring more developed than permitting. While inspection functions are generally well established, imposed fines tend to be too low to combat the sources of environmental problems effectively.

Due to difficulties with ensuring adequate financing of State functions, staff morale within environmental agencies can often be low. Other ministries are normally less involved in enforcement activities; thus the potential for interagency cooperation is underutilised.

According to an evaluation by the Environment DG, good progress in transposition of the *acquis* into national legislation and their implementation was achieved with respect to horizontal legislation (environmental impact assessment, access to information) and in the areas of air and waste management. Challenges still remain, however, particularly in implementing the integrated pollution prevention and control (IPPC), the large combustion plants, and the Seveso directives.

<sup>(1)</sup> By October 2001, negotiations on the environmental *acquis communautaire* were provisionally closed with Slovenia, the Czech Republic, Estonia, Hungary, Lithuania and Cyprus, ongoing with Poland, Latvia, Slovakia, Malta and Bulgaria, not yet opened with Romania and Turkey (Blanko 2001).

<sup>(2)</sup> Cuts in air pollution are expected to reduce the number of chronic bronchitis cases by approximately 43 000 to 180 000 cases, and to help avoid some 15 000 to 34 000 cases of premature deaths. In addition, reductions in transboundary air pollution will also benefit current EU Member States and other neighbouring countries: for the EU, the benefits from the implementation of EU air directives by the candidate countries could amount to EUR 6.5 billion (UNEP 2001).

<sup>(3)</sup> The following discussion is based on (Blanko 2001).

## 2. New challenges for SoE reporting: the EEA/EU perspective

### 2.1. New political context

A total of 13 countries have applied to join the European Union and, with enlargement, the area of the EU will increase by one third and have more than 500 million inhabitants. There will be a wider range of economic capabilities from east to west and an open market where goods and services can freely circulate.

The diversity of environmental challenges faced by the European Union is large and will further increase with the entry of new member countries. As a result of enlargement, the variety and complexity of environmental problems will grow, due to both the increase in geographical scale and the different economies and national priorities.

The enlargement process started in the mid-1990s. There is a 10-year transition period during which both the accession countries (ACs) and the EU are able to prepare for the enlargement by stabilising economies, restructuring sectors, and implementing EU environmental legislation into national legislation.

In this transition period, SoE reporting may focus on ex-ante analysis of changes the enlargement may bring, such as 'what if... studies'. The SoE reports may contain assessment of structural changes in sectors in the ACs, analyse the implication of transforming EU policies such as the CAP, TENs and the structural funds in the ACs and progress and constraints in implementing EU environmental policies in the ACs. In addition, SoE reports may describe the effects of trade and financial and technical assistance being provided to the ACs <sup>(4)</sup>.

When the ACs have joined the EU, the focus of SoE reporting may change to ex-post assessment of the consequences of the enlargement. The reporting also has to cover the diversity within the enlarged EU from the advanced north-western countries, to the richer ACs in central Europe and further to the relatively poor ACs.

Also, the diversity of policy instruments and policy actors is growing. During the last 10 years, EU environmental policies have changed from single-issue 'first generation' directives to more coherent framework directives such as the water framework directive and rural development programmes. In future, EU legislation will provide a framework for action — using horizontal legislation, framework legislation and common-market-related legislation. The national implementation of EU legislation may be heterogeneous due to different national focuses and different environmental problems.

Consequently, reporting at the EU level will be more complicated due to:

- the more complex horizontal legislation and framework legislation, which only provides general guidelines for policies, so that it may be complicated to collate to an EU/ European overview of the environmental state and pressures. It is hoped that the framework legislation will be implemented with requirements and guidelines for reporting of progress at national and EU levels;
- many subnational actors such as river basin authorities or regional agri-environmental programmes will implement the framework legislation. This will further complicate the information flows for reporting at the EU level.

<sup>(4)</sup> As was highlighted in a discussion at the eighth workshop of the EEA Expert Group on SoE Guidelines and Reporting, Member States and ACs expect that the EU and EEA will be able to provide information about the enlargement process itself and its environmental consequences such as:

- information on legal obligations of ACs as well as EU resources available for them;
- clearly-expressed (visualised) contributions of individual countries to EU environmental problems in the new circumstances;
- impact of enlargement on the European environment altogether; and,
- regional 'what-if studies' to track the way into the future.

Enlargement will put even more focus on the EU's ability to manage such transnational environmental pollution issues as climate change, transboundary air pollution and regional water quality issues like eutrophication. Target sharing and joint implementation of future environmental policies similar to the Kyoto Protocol may be one of the directions for future EU environmental legislation. Such target-sharing policies will have to be based on a solid overview of the situation in the enlarged EU, and therefore also require that there is sufficient information to base such policies at the EU level. One such example is the environmental aspects of the World Trade Organisation negotiations.

The EU's SoE reporting will have to cover the transnational environmental pollution issues and assess the effects of EU policies in a more complex setting, with a poorer information base.

There exists a lot of information about many of the 'old' environmental problems (such as climate change and acidification) that serves as the basis for EU policies. The information situation for the ACs is improving. New EU environmental policies such as the *Future strategy for chemical policies or environment and health* (CEC 2001/88) will also need a good information base to ensure the right focus and priorities. However, the information currently being produced and collated both regionally and on the national levels (both EU and AC) is sparse, and this may contribute to the complexity of reporting on these issues at the EU level.

Reporting in relation to these new environmental issues has to be strengthened to ensure an optimal information base for policies.

The EU sustainable development strategy to be implemented in the coming years will put more focus on synergies between environmental protection and economic and social development. In addition, the ongoing sectoral integration process also requires new ways of reporting, such as the indicator set for transport (TERM).

In the coming years, the current environmental reporting will change to cover aspects of sustainable development

and sectoral integration. The EU/EEA has an opportunity and challenge to put up some general framework and indicator sets for this reporting, fully integrating both old and new and old Member States in this reporting from the very beginning.

## 2.2. New geographical coverage

As a result of enlargement, the area of the EU will increase to 200 000 km<sup>2</sup> and cover more than 25 countries. There will be an increase in the range and diversity of sectors, economic capabilities and environmental problems from north to south and from east to west.

The reporting at the EU level will be more complicated since:

- the wider geographical area will make it more difficult to describe the environmental state and trends, for example, to aggregate the trend in river water quality from the relatively clean northern rivers to the more polluted rivers in central Europe;
- it will also be a challenge to describe environmental issues only related to certain regions, for example, contaminated sites due to military bases in CEECs or regions with severe water resource problems.

With the focus on the enlarged EU, SoE reporting may have to adopt a regional approach. There are several regional possibilities:

- a **standard classification** of countries, for example, Nordic, western, eastern and southern countries, used for all environmental issues. This method has generally been used in the first EEA's European SoE reports.
- a **specific classification** depending on the environmental issue in question. For example, in reporting on water resources, countries may be classified into countries with no water resource problems (sufficient water), countries with some water stress; and countries with severe water resource problems.
- reporting on **regional convention areas** such as the Danube catchment area, the Alpine region, the North Sea, the Baltic Sea, etc.

The **standard classification** of countries will be an advantage in many cases, but it may conceal large regional differences. Also, for several issues it may not be the optimal way to present the specific environmental information.

The **specific classification may cause** confusion among readers due to several changing classifications. In many cases, the optimal classification according to environmental issues will not be by countries, but by sub-national regions. For example, agricultural practices in Denmark and Germany are quite comparable with practices in southern England and southern Sweden, but not with practices in Scotland or central and northern Sweden. Such classifications by environmental issues demand a lot of data and information.

In several cases, the EU's SoE reporting may be based on existing reporting from convention areas and these will be valuable inputs to EEA SoE reports.

**East–west issues.** In the coming years the environmental impacts of east–west issues such as increased trade, movement of heavy industry and old technology (for example, used cars) as well as foreign investment in the transition countries, will have to be accessed and reported. The EU is funding some of the restructuring and modernisation of the old, highly polluting technologies as well as funding investment in environmental infrastructures, for example, wastewater treatment plants.

Monitoring and reporting of this west–east interaction and assessment of the related environmental impacts will be important aspects of the EU's SoE reports.

**Large diversity in economic level and sectors.** There will be wide differences in the national economies in the enlarged EU. The average GDP per capita is 5–10 times higher in the current EU compared to the ACs. However, the economic growth is expected to be high in the ACs and the forerunner countries may catch up with the EU level in 10–20 years' time.

As described in Section 1.2, environmental problems in the ACs can mainly be related to inefficient energy and production systems in various sectors. With the

restructuring and modernisation of the energy and industrial sectors, marked changes have been observed in the ACs since the 1990s. The pressures on the environment will generally be reduced by the structural changes in these two sectors. However, structural changes in the agricultural sector (such as the shift to more intensive production methods) and in the transport sector, as well as the increase in consumption, may negatively influence the environment.

In the current EU countries, much of the environmental problems are related to intensive consumption of natural resources and energy, a high growth in transport, intensification and specialisation of agricultural production and the high use of chemicals.

While the ACs are more likely to avoid some of the environmentally detrimental development paths that western Europe took in the last 30–50 years, the EU countries will tend to focus on trends in the direction of decoupling, eco-efficiency, dematerialisation and detoxification. While the focus of environmental reporting on the old EU Member States may be rather focused on decoupling economic growth from environmental pressures and new environmental priorities such as the use of materials (resources), chemicals and environment and health, reporting on the ACs may be more directed towards structural changes in the sectors and the related environmental aspects.

SoE reporting at EEA/EU level has to both cover the environmental impacts of the sectoral structural changes in the transition countries, and describe decoupling and new environmental issues relevant to the current EU members.

Detailed SoE reports (country breakdown, outlooks) or more extensive reports. By comparing the two reports *Europe's environment — the second assessment* (Second assessment, from 1998) and *Environment in the European Union at the turn of the century* (EU98, published in 1999) some major differences in approach may be identified.

- The focus of the second assessment (pan-European coverage) was on describing the current state of, and

pressures on, the environment including developments during the last 10 years.

- The focus of EU98 (mainly on the EU) was on describing development in terms of driving forces and pressures, as well as presenting outlooks for the coming 10–15 years.

In an enlarged EU/EEA, the production of SoE assessments that cover the whole DPSIR chain and include environmental outlooks will be a major challenge.

In the **EU SoE reports** and the **environmental signals indicator-based reports** some information was presented as country breakdowns (in the form of graphs and tables). In the Second assessment report country information was generally presented in the form of maps, while graphs presented aggregated regional information (for example, a comparison of trends in western, central, and eastern Europe). A separate statistical compendium with country information was published for the *Second assessment*.

In an SoE/indicator-based report covering the enlarged EU/EEA it will be difficult to present information as country breakdowns.

However, many EEA Member States request this kind of information. The EEA has to explore new ways of presenting country breakdowns, for example as aggregated indicators (smiley table) or putting country breakdown into annexes or on the Internet.

Producing pan-European reports and reports on an enlarged EU also requires a discussion of the international institutional context, that is, what is in place already and what can be used by the EEA. There are several other international institutions such as Eurostat, the OECD, UN/ECE, UNEP/MAP, Baltic 21, Helcom, Osparcom and the Baltic Environmental Forum that report on environmental and sustainability issues.

Good cooperation and coordination of the different products is necessary to ensure that resources are optimally used. The EEA may use extracts of information produced by other organisations, for example, the EEA's SoE chapter on marine waters can be partly based on information produced by the marine convention organisations such as Helcom, Osparcom, and the EEA may use information from, for example, the OECD's environmental outlook report or reports on development in the transition countries.

#### **Box 1. Case study: Reporting on agriculture and biodiversity**

To further understand the consequences of enlargement for reporting on agriculture and biodiversity, a case study has been analysed to see if the tools for monitoring the possible consequences of enlargement are available. The development of the agricultural sector and its effect on biodiversity during the process of enlargement is uncertain. However, based on some assumptions and a possible scenario of the development, it can be assessed if the tools for evaluating the effects are available. The evaluation is both relevant for SoE reporting at the EU/EEA level and in the ACs.

##### **Assumptions**

Productivity (for example, yield per ha, milk per dairy cow) in the agricultural sector will continue to increase (maybe at a slower speed). The CAP will develop in the direction of reduced price/market support and increased support for rural development and environmental measures and the total expenditure may be reduced. In the current EU, there is a surplus of agricultural products while production is more or less in balance with consumption in the ACs. Enlargement will result in an open market for agricultural products and some kind of CAP in the enlarged EU.

##### **One plausible scenario:**

- As a consequence of the increase in productivity and the replacement of some of the less productive practices with more productive ones, the current agricultural production can be maintained without increasing the area of land used for intensive agriculture.
- Due to the focus on environmental issues, the agri-environmental measures in the CAP reform, and the requirement of healthy farm products (organic farming, livestock welfare), some areas of intensively driven agricultural land in the current EU Member States will change to more extensive production practices. In addition, the process of abandoning the less favourable agricultural land will continue. Altogether, the intensively driven agricultural land in the current EU Member States may be reduced.

- In the ACs, there will be marked changes in the agricultural sector. The number of farmers will be reduced. Some farmers will adopt intensive production methods and will be able to compete in the open market. Most of the current extensively driven agricultural land may be abandoned.
- The high-nature value and biodiversity in the ACs is closely linked to the extensively driven agricultural areas, and a consequence of the change in the agricultural sector may be the loss of this biodiversity.

Do we have the tools (information and indicators) to measure the process described in the above scenario?

- The current agri-environmental indicators and statistics generally describe the national trends in agricultural activities and pressures such as development in livestock, irrigated area, use of fertilisers and pesticides, nutrient surplus and emissions of ammonia and greenhouse gases. However, information on intensification, extensification and changes in practices is generally more difficult to compile. There may be a need for establishing a system (national, ACs or EU level), which will monitor these more complex issues.

Current agri-environmental indicators may not be sufficient to report on the intensification, extensification and abandoning of agricultural land expected in the ACs in the coming years. A system to monitor these more complex issues will be needed.

- The changes in agriculture have social and rural development implications. The monitoring of development due to enlargement is therefore closely linked to the sustainable development framework.

When reporting on development in agriculture, a sustainable development framework is needed.

- In the current EU Member States, the focus on reporting agri-environment relationships may, in the future, shift to reporting decoupling of environmental pressures from production. In the ACs, on the contrary, there will be an increase in the intensively driven agricultural production and abandoning of agricultural land. The change in environmental pressures will result from the changing agricultural practices. Those two relatively different developments may need different sets of agri-environmental indicators, such as ecoefficiency indicators in the current Member States and driving force and pressure indicators in the ACs.
- Changes in biodiversity and the pressures affecting biodiversity are, in many cases, difficult to describe using indicators. In the EU, agri-environment indicators are listed in relation to sector integration (COM 2000/20), for example, all indicators related to habitats and biodiversity need further work. It will be a complex task to measure the effects of changes on biodiversity in agriculture in the enlarged EU.

Indicators describing how agricultural activities are affecting biodiversity are very much needed.

- In the EU sustainable development strategy, one of the 'headline objectives' is to 'Protect and restore habitats and natural systems and halt the loss of biodiversity by 2010', the strategy states that the Commission will establish a system of biodiversity indicators by 2003. Among requirements of such a system would be indicators which are able to measure interactions between agriculture and biodiversity.

When establishing the forthcoming system of EU biodiversity indicators, the aspects of enlargement, changes in agriculture and biodiversity have to be addressed.

To understand the consequences of enlargement on agriculture and biodiversity is a major challenge. At the moment, many of the tools designed to monitor the effect of such changes on biodiversity and other environmental pressures are missing or not optimal. Therefore, it will be a challenge in the coming years to establish systems which can evaluate the effects of enlargement.

## 3. New challenges for SoE reporting: new members' perspective

### 3.1. Legal and political considerations

In the ACs, as in other European countries, SoE reporting is primarily governed by national legislation and international obligations. Council Directive 90/313/EEC of 7 June 1990 on freedom of access to information on the environment among other things requires (Article 7) that 'Member States shall take the necessary steps to provide general information to the public on the state of the environment by such means as the periodic publication of descriptive reports'. (However, the 'novelty' of 90/313/EEC provisions for new members will become

somewhat diluted since the directive itself is now being amended to comply with the norms of the Aarhus Convention signed both by the EU and the majority of European countries.)

EU legislation on access to environmental information will reinforce legal obligations towards regular environmental reporting of national environmental and other public authorities in general.

Major EU environmental policies such as the sixth environmental action programme (Box 2), and the coming EU strategy for sustainable development, will

#### Box 2. The sixth environment action programme of the European Community

The new environment action programme entitled Environment 2010: our future, our choice takes a wide-ranging approach to the EU's environmental challenges, and gives a strategic direction to the Commission's environmental policy over the next decade, as the Community prepares to expand its boundaries. The new programme provides the environmental component of the Community's strategy for sustainable development. It continues to pursue some of the targets from the fifth environment action programme, which came to an end in 2000. But the new sixth environment action programme 'Environment 2010: our future', our choice goes further, adopting a more strategic approach. It calls for the active involvement and accountability of all sections of society in the search for innovative, workable and sustainable solutions to the environmental problems we face.

The new programme identifies four priority areas:

- climate change;
- nature and biodiversity;
- environment and health;
- natural resources and waste.

To achieve improvements in these areas, the new programme sets out five approaches. These emphasise the need for more effective implementation and more innovative solutions. The Commission recognises that a wider constituency must be addressed, including business, which can only gain from a successful environmental policy. The programme seeks new and innovative instruments for meeting complex environmental challenges. Legislation is not abandoned, but a more effective use of legislation is sought, together with a more participatory approach to policy-making. The five key approaches are to:

- ensure the implementation of existing environmental legislation;
- integrate environmental concerns into all relevant policy areas;
- work closely with business and consumers to identify solutions;
- ensure better and more accessible information on the environment for citizens;
- develop a more environmentally conscious attitude towards land use.

A number of foreseen activities to implement the programme directly relate to environmental information, they include proposals to:

- monitor how European laws are applied and compile a regularly up-dated scoreboard;
- publicise the success and failure of different national governments through 'name, shame and fame' exercises;
- develop and publish regular reports of environmental indicators, illustrating progress towards a better environment;
- review the way information is collected and reported with the aim of introducing a more comprehensive image of the state of the European environment;
- improve citizens' access to information.

Sources: CEC 2001a, CEC 2001b, CEC 2001/31 final.

pose a challenge for ACs with respect to data collection and indicator development. As a follow-up to the Stockholm and Gothenburg European Councils, the Commission has been working on developing a number of sustainable development indicators on environment. The environment indicators added to the existing set of socioeconomic indicators will be presented in an annual synthesis report to the spring European Council. The report will follow the progress made in economic, social and environmental aspects of the EU's sustainable development strategy. The indicators will cover ACs for the first time in 2003. Environmental reporting will also be affected by adoption of EU policies such as the common agricultural policy, the Structural Funds and TENs. The priorities of these major policies may influence the way in which information is presented and analysed in national SoE reports of the ACs.

Information from the ACs will be required to assess progress with respect to major EU environment-related policies such as the sixth EAP, the strategy for sustainable development, the common agricultural policy, the Structural Funds and TENs. Within national SoE reports, information will need to be analysed in these contexts too.

Finally, after joining the EU, new members will be bound by EU legislation to report various aspects of the implementation of the legislation to the European Commission (Tables 2 and 3). Although in the framework of the sixth environmental action programme, activities have started to modify these requirements for progress reporting, there is and will be an interaction between some of these legal requirements and the contents of state-of-the-environment reports.

Table 2. Examples of reporting requirements on descriptions of measures taken to implement EU directives

Source: Vaz et al 2001.

Item of legislation	Requirement for descriptions of policy programmes and/or measures
75/439 waste oils	Have required measures been taken? Identify constraints
75/440 surface water	Action and management plan or programme for improvement
75/442 waste framework directive	Details of waste management plans; general measures
76/160 bathing water	Short description of improvement schemes; timetable; investments
76/464 dangerous substances in water — framework	Programme description and objective; expected reduction; new programme foreseen
77/312 screening for lead	Inform the Commission of measures taken in cases of exceedance of reference levels
78/659 freshwater fish	Measures foreseen in improvement programmes ( very brief )
82/884 air quality — lead	Report on improvement measures
91/689 hazardous waste	Have measures been taken or plans made?
92/43 habitats and species conservation	Inform the Commission of conservation measures, including plans and statutory, administrative or contractual measures
93/500 renewable energy (ALTENER)	Submit list of adopted measures and bodies to undertaken them
94/62 packaging	Necessary measures taken? Economic instrument?
96/61 integrated pollution prevention and control	Measures taken to ensure guidelines followed; development in best available technologies

Requests for information on effects and effectiveness in EU environmental legislation

Table 3.

Source: Vaz et al 2001.

Item of legislation	Detail of reporting requirement requesting evaluations of policy programmes/measures
<b>Air quality</b>	
85/210 lead in petrol	Inform the Commission (upon request) of the effects of the implementation of this directive on human health/energy policy
R3528/86 monitoring of forest damage	Report on information regarding possible causes of damage and socio-economic impact of damage, and evaluate data collected annually
96/61 integrated pollution prevention and control (SRD)	Report every three years on how Member State views the effectiveness of the directive in comparison with other instruments
96/62 air quality framework (second report within framework of SRD)	Report on progress every three years
<b>Harmful substances</b>	
77/312 screening for lead	Provide the Commission annually, for four years, with information on the causes or factors leading to high lead levels in lead
90/219 genetically modified organisms (GMOs) — contained use	Report annually on the evaluations of risks and inform the Commission of the effectiveness of measures taken, including recommendations to limit effects and avoid similar accidents in future
<b>Waste</b>	
86/278 sewage sludge	Report every four years on difficulties encountered
<b>Water</b>	
78/176 titanium dioxide (SRD)	Report every three years on the effects on environment of waste and assessment of surveillance results
91/676 nitrates from agricultural sources	Assess effectiveness of action programmes in a report every three years and inform the Commission every four years on the effectiveness of action programmes/assess the cost-effectiveness and effectiveness of additional measures in relation to other possible measures
<b>Wildlife and countryside</b>	
92/43 habitats and species conservation	Inform the Commission every six years of the evaluation of impact of measures on conservation status of habitats and species
<b>Financial and economic instruments</b>	
1164/94 cohesion fund	Ensure that Member State and Commission shall evaluate implementation and impact (and environmental impact)
1750/99 rural development regulation	Member State to Commission independent <i>ex ante</i> , mid-term and <i>ex post</i> evaluations of impacts, effectiveness, efficiency, etc.
<b>International conventions</b>	
D1999/389 greenhouse gas monitoring mechanism	Publish periodically estimates of effects of policies and measures (plus intermediate indicators of progress); assess the economic impact; evaluate the effectiveness

### 3.2. Methodological considerations

Although no uniform methodology for SoE reporting exists in Europe *per se*, there is a continuous dialogue among SoE reporters facilitated by European organisations such

as the EEA, the Environment DG and Eurostat, as well as non-Europe-based organisations such as the OECD (Organisation for Economic Cooperation and Development) and UNEP (United Nations Environment Programme).

This has led to a widespread adoption of such now well-accepted methodological elements as the DPSIR reporting framework and indicator-based reporting in principle, the use of limited sets of headline indicators, and the indicators of integrating environmental concerns into sectoral policies. Many of these approaches have already been adopted by many ACs, as they have already, for a long time, been quite eager to harmonise their reporting approaches with the 'best European practices' and to streamline environmental reporting altogether (Anderson et al. 1999; Radziejowski 2000).

Other elements of SoE reporting methodology fast developing in Europe include participatory assessments, the use of scenarios and outlooks, the evaluation of efficiency and cost-effectiveness of environmental policies, and reporting within the framework of sustainability.

Growing institutionalised involvement of ACs in SoE reporting methodology discussions and processes will further influence their approaches both in terms of improved technical capacities and by bringing new techniques higher on national agendas. Further increased use will be made of indicator-based reporting, scenarios, environmental outlooks, tools for policy evaluation and participatory assessment techniques.

### 3.3. Contents-related considerations

Although the contents of national SoE reports in the ACs after joining the EU will still be driven by their national priorities and interests, it is reasonable to expect that, in addition to comparing national developments with nationally set goals and targets,

the importance and relevance of comparisons of the national performance with that of other EU countries, as well as with various goals and targets set on an EU level, will increase.

Reflecting major environment-significant developments, the ACs in their SoE reports will have to focus on the marked economic and structural changes in the sectors, which will happen during the transition period. (Such national reporting could benefit from already existing regional overviews — Box 3. See also parts 1 and 2 of this report.)

The increased trade and interaction between new and existing EU members in such forms as foreign investment, movement of waste, heavy industry and old technology going from west to east may require

greater attention to the environmental aspects of those issues in the national SoE

#### Box 3. Overview of regional studies

There are currently few regional studies of the relationship between the sectoral structural changes and environmental performance during the transition period.

- The EEA briefly described the development in AC-10 in the report *Environment in the European Union at the turn of the century* and tried, through the use of 'what-if studies' for specific issues, to analyse the future situation (EEA 1999).
- The OECD made a comprehensive assessment of the development in the transition countries (OECD 1999).
- An evaluation of the first 10 years of transition in a number of ACs is presented in the joint report by the Centre for Environmental Studies, Hungary; the Institute of Sustainable Development, Poland; and the Institute of Environmental Policy, Czech Republic (Centre for Environmental Studies, 2001).
- The World Bank's Europe and central Asia programme includes an assessment of sectoral development and environmental performance. (<http://lnweb18.worldbank.org/eca/eca.nsf>).
- Brief sections on environmental performance are included in national reporting as part of the accession strategy, as featured in reports of the series 'Agricultural situation and prospects in the central and eastern European countries'. ([http://europa.eu.int/comm/agriculture/publi/peco/index\\_en.htm](http://europa.eu.int/comm/agriculture/publi/peco/index_en.htm)).

reports. This will, in turn, require an improved flow of transboundary environmental information and, to a certain extent, an improved cross-border harmonisation of SoE reporting.

During the current transition period, reporting on the enlargement process itself is necessary for national policy development of both EU Member States and the ACs <sup>(5)</sup>.

Relevant for national reporting are issues of implementation, regional cooperation and cross-border interactions associated with the enlargement process itself such as:

- capacities of the ACs to comply with the new requirements, compliance costs, and likely tangible effects of enlargement (experience shows, however, that such effects are difficult to assess);
- actual compliance with EU regulations;
- legal reporting to the EU, its cost and usefulness (there are known examples of information being compiled at EU request but later not used and lost);
- case studies of good examples of cooperation related to the accession process, including results of the twinning programmes between

Member States and accession countries; and,

- experiences and common issues in neighbouring countries, especially on transboundary issues (there is regional interest in issues affected by enlargement, such as eutrophication in the Baltic Sea).

Whereas SoE reporters themselves may not always be sufficiently aware of enlargement-specific information already available (supply-of-information and inter-agency coordination challenges), the overall political demand for analysing the environmental effects of enlargement, apart from compliance, is also still relatively weak (demand-for-information challenge). The general public seems to show greater interest in the impacts of enlargement than do policy-makers.

National reporters will need help in placing enlargement-specific information higher on the national agendas. Relating to this, it is important to strengthen national reporters, both technically and politically and particularly in the ACs, in their ability to take an analytical, compared to simply descriptive, role in presenting information to the general public and policy-makers.

<sup>(5)</sup> The discussion below is based on a special session of the eighth workshop of the EEA Expert Group on SoE Guidelines and Reporting dedicated to emerging information needs within the countries related to the enlargement process and to implications of enlargement for environmental reporting on the national level; cf. footnote 4.

## 4. Conclusions

### 4.1. Implications for SoE reporting: an EU/EEA perspective

**Ex-ante analysis of consequences of enlargement.** In the transition period SoE reporting may focus on ex-ante analysis of changes the enlargement may bring about such as 'what if... studies'. The SoE reports may contain assessment of structural changes in sectors in the ACs, analyse the implication of transforming EU policies such as the CAP, TENs and Structural Funds in the ACs, and describe the progress and constraints in implementing EU environmental policies in the ACs. In addition, SoE reporting may describe the effects of trade as well as the financial and technical assistance being provided to the ACs.

**Sustainable development, the sixth environmental action programme (6 EAP) and sectoral integration.** In the coming years the current environmental reporting will change to cover aspects of sustainable development, new issues in the 6 EAP such as chemicals and resource efficiency, and sectoral integration. The EU/EEA has the opportunity and challenge to put up some general frameworks and indicator sets for this reporting.

**East-west issues.** In the years to come the environmental impacts of east-west issues such as increased trade, movement of heavy industry and old technology (such as, used cars) as well as foreign investment in the transition countries, will have to be assessed and reported. The EU is funding some of the restructuring and modernisation of the old, highly polluting technologies, as well as funding investments in environmental infrastructures such as wastewater treatment plants. Monitoring and reporting of this east-west interaction and assessment of the related environmental impacts will be important aspects of the EU SoE reports.

Finally, reporting at the EU level altogether will be more complicated, among other factors due to:

- a shift in EU policy to framework legislation such as the water framework directive and rural development programmes which many sub-national actors, such as river basin authorities or regional agri-environmental programmes, are implementing;
- the wider geographical area, making it more difficult to describe the environmental state and trends. It will also be a challenge to describe environmental issues only related to certain regions, for example, contaminated sites due to military bases in CEE countries or regions with severe water-resource problems;
- the current reporting with presentation of country breakdowns possibly changing to presentation of regional information (for example, northern EU, southern EU etc.). New approaches to country comparison have to be found;
- wide differences in national economies as well as the structure of the economic sectors in the Member States of the enlarged EU, which may complicate the reporting.

## 4.2. Implications for SoE reporting: an AC perspective

**Legal and political considerations.** A new set of environmental reporting obligations on ACs will emerge from various EU policies and directives. General EU legislation on access to environmental information will reinforce legal obligations towards regular environmental reporting. Information from the ACs will be required to assess progress with respect to the major EU environment-related policies such as the sixth EAP, the strategy for sustainable development, the common agricultural policy, the Structural Funds and TENs. Within national SoE reports, information will need to be analysed in these contexts too.

**Methodological considerations.** Growing institutionalised involvement of the ACs in SoE-reporting methodology discussions and processes will further influence their approaches both in terms of improved technical capacities and by bringing new techniques higher on national agendas. Further increased use will be made of indicator-based reporting, scenarios, environmental outlooks, tools for policy evaluation and participatory assessment techniques.

**Contents-related considerations for national reporting.** The importance and relevance of comparisons of the national performance with that of other EU countries as well as with various goals and targets set on EU level will increase. The ACs will, in their SoE reports, have to focus on the marked economic and structural changes in the sectors, which will happen during the transition period. Greater attention will be required to the environmental aspects of transboundary issues in national SoE reports. This will, in turn, require an improved flow of transboundary environmental information and, to a certain extent, an improved cross-border harmonisation of SoE reporting.

Reporting on the enlargement process itself is required for national policy development both within EU Member States and the ACs. Relevant for national reporting are issues of implementation, regional cooperation and cross-border interactions associated with the enlargement process. National reporters will need help in placing enlargement-specific information higher on the national agendas. Relating to this, it is important to strengthen national reporters, both technically and politically and particularly in the ACs, in their ability to take an analytical, compared to simply descriptive, role in presenting information to the general public and policy-makers.

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