Paving the way for EU enlargement

Indicators of transport and environment integration
TERM 2002

Summary

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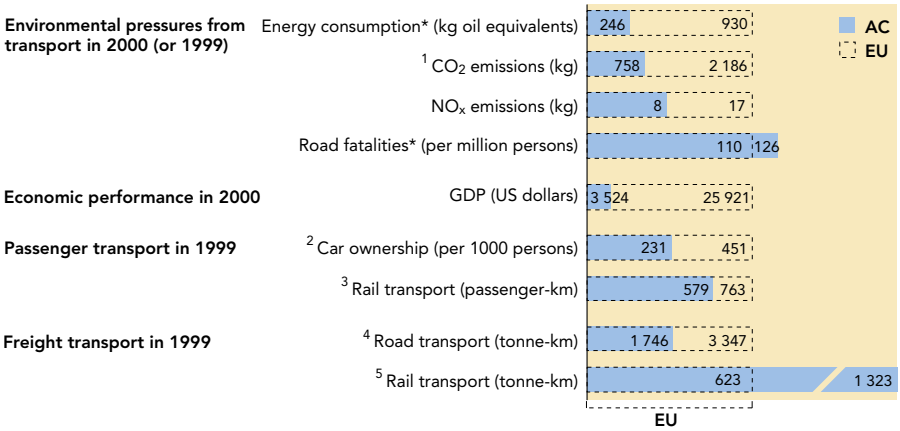
The accession countries: a different starting position, but moving rapidly towards the EU's unsustainable transport patterns

Political and economic restructuring in the accession countries (ACs) during the past decade has led to substantial changes in their transport systems. Transport volumes, which fell significantly following the economic recession of the early 1990s, are now rising again as economies recover. The modal split (the market shares of the different transport modes) – although still much better than in the EU – is evolving towards a road-orientated system. So, just as for the EU, transport trends in ACs point away from the objectives of the sustainable development strategy, i.e. to decouple transport growth from economic growth and shift from road to rail, water and public transport.

Transport energy consumption and associated greenhouse gas emissions per capita in the ACs are still three to four times lower than in the EU, and nitrogen oxides emissions per capita are around 50 % lower. Road and rail networks are less dense, and the fragmentation of their territory is therefore less pronounced. But this position is changing rapidly.

As in the EU, transport greenhouse gas emissions and energy consumption are on the rise. Motor way lengths have doubled over the past 10 years, extending fragmentation of land. The car fleet is on average four to five years older, so ACs lag several years behind the EU in terms of uptake of cleaner technologies and fuels. The decreases seen in emissions of certain air pollutants (e.g. NO_x) show that the ACs are on the way to bridging this technology gap. Urban air quality, however, remains poor. The growth in traffic is increasingly offsetting safety improvements in cars and infrastructure; the number of fatalities is now stabilising around 21 000 a year in the ACs compared with 41 000 in the EU.

Figure1 **Ratios between ACs and the EU (with absolute values) for environmental pressures, GDP and transport performance, all expressed per capita**



Notes: * Data refers to 1999.
[1] Cyprus, Malta and Turkey not included in AC data.
[2] Bulgaria and Turkey not included in AC data.
[3] Estonia and Turkey not included in AC data.
[4] Bulgaria, Cyprus, Malta, Slovak Republic and Turkey not included in AC data.
[5] Turkey not included in AC data.

Sources: IEA, 2001a; EEA, 2002a-e and EMEP, 2002; UNECE, 2001a-b; Eurostat, 2002a; World Bank, 2002

Current policies prioritise infrastructure development and technology and fuel regulation; a more integrated approach is not yet emerging

In recent decades, the EU has focused its transport and environment policies mainly on infrastructure investment (e.g. the trans-European transport network (TEN-T)) and on environmental and safety regulations. A similar pattern is emerging in the ACs, not surprisingly since integration of the EU acquis is the prerequisite for accession. The indicators presented in this report already show the benefits of the early introduction of EU vehicle, fuel, environmental and safety standards in ACs.

A good-quality transport infrastructure network is an essential backbone for society and the economy and for the ACs' future integration in the EU. The development of the TEN-T and its extension to the east is therefore one of the common transport policy's key priorities. However, no strategic environmental assessment of the TEN-T and its extension has yet been made, nor have the network's economic and social benefits and impacts been assessed.

Data on infrastructure investments are old, but recent figures on funding by international banks indicate that road-building is now given higher priority than rail development. This indicates a risk for further erosion of the contribution rail transport has made in the past to the transport systems in the ACs.

More recently, additional policy lines that aim to restrain the growth in transport and improve the modal split have emerged in the EU. These include internalisation of external costs, voluntary agreements with industry, revitalisation of rail

and inland waterways, setting of objectives and targets, better coordination with spatial planning, and the use of strategic environmental assessment to support infrastructure planning. Some progress is being made in these areas in the EU. The ACs could learn from the EU's experience with these relatively new tools.

Since the 1998 Cardiff Summit, seven Member States have developed national integrated transport and environment strategies and seven have set up or are setting up national indicator-based monitoring systems. The Transport Council has also invited the future member countries to adopt the EU's integration principles. National integrated strategies and indicator-based monitoring systems are, however, still lacking in the ACs.

TERM background and context

This is the third indicator-based report under the transport and environment reporting mechanism (TERM) – following the previous reports (TERM 2000, TERM 2001) – including for the first time the countries that have applied for EU membership: the accession countries (ACs). The report compares the trends there with recent EU developments.

The main aim of TERM is to monitor the progress and effectiveness of transport and environment integration strategies on the basis of a core set of indicators. The TERM indicators were selected and grouped to address seven key questions:

1. Is the environmental performance of the transport sector improving?
2. Are we getting better at managing transport demand and at improving the modal split?
3. Are spatial and transport planning becoming better coordinated so as to match transport demand to the need for access?
4. Are we optimising the use of existing transport infrastructure capacity and moving towards a better-balanced intermodal transport system?
5. Are we moving towards a fairer and more efficient pricing system, which ensures that external costs are internalised?
6. How rapidly are cleaner technologies being implemented and how efficiently are vehicles being used?
7. How effectively are environmental management and monitoring tools being used to support policy- and decision-making?

These questions – excluding question 3 for which there is insufficient data – provide the structural framework for the presentation of key trends and messages that follow in the rest of the summary.

Some key messages

As with previous reports, *Paving the way for EU enlargement* evaluates the indicator trends with respect to progress towards existing 'integration' objectives or targets[1]. These were drawn from EU policy documents such as the sixth environmental action programme (6EAP), the common transport policy, the EU sustainable development strategy and various environmental and transport directives.

[1] A description of the related transport and environment policy documents is given on page 17

The 'smiley' faces next to each indicator aim to give a concise assessment of the indicator trend in the ACs, based on the following broad guidance:

☺ positive trend, moving towards policy objective or target

😐 some positive development, but either insufficient to reach policy objective or mixed trend within the indicator

☹ unfavourable trend, moving away from policy objective or target

⍰ impossible to evaluate the trend because of data gaps or lack of policy objective or target.

Is the environmental performance of the transport sector improving (1)?

☹ Energy consumption by transport is increasing rapidly, mainly as a result of growth in road transport

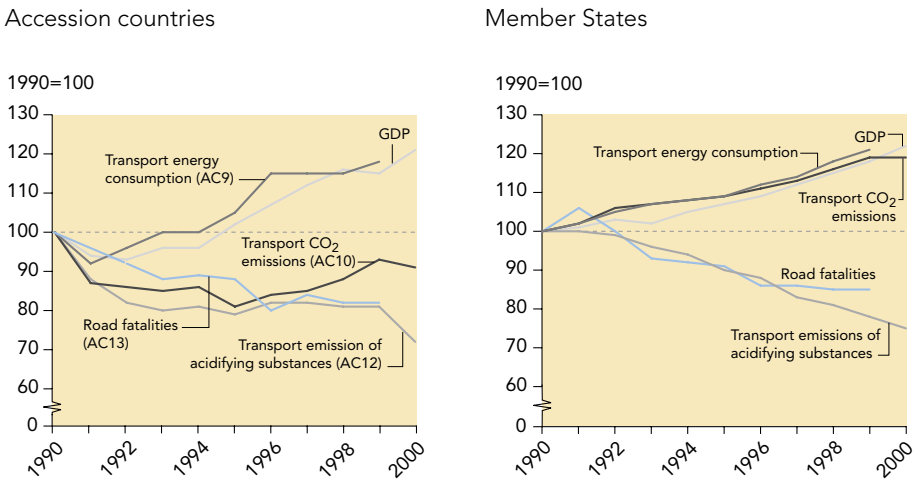
☹ AC transport CO_2 emissions dropped in the early 1990s, but are now growing with traffic volumes

😐 AC transport emissions of air pollutants dropped at the beginning of the 1990s, and have since stabilised

😐 Urban air quality is improving but urban populations are still exposed to pollution levels that pose health risks

😐 Road fatalities in the ACs fell in the early 1990s, but are now levelling at around 21 000 a year

Environmental pressures from transport for ACs and EU-15, 1990-2000 Figure 2



Notes: Energy consumption includes road, rail, domestic and international aviation, inland navigation, oil pipelines and non-specified transport (AC-9 excludes the Baltic States and Slovenia due to missing 1990 and 1991 data). Emission data include all transport modes except international aviation and maritime shipping; AC-10 excludes Cyprus, Malta and Turkey, AC-12 excludes Malta.

Sources: IEA, 2001a; EEA, 2002a-e and EMEP, 2002; UNECE, 2001b; Eurostat, 2002a; World Bank, 2002.

Is the environmental performance of the transport sector improving (2)?

☹ Land take by transport infrastructure is increasing

😐 Land fragmentation in the ACs is less than in the EU, but is increasing with infrastructure development

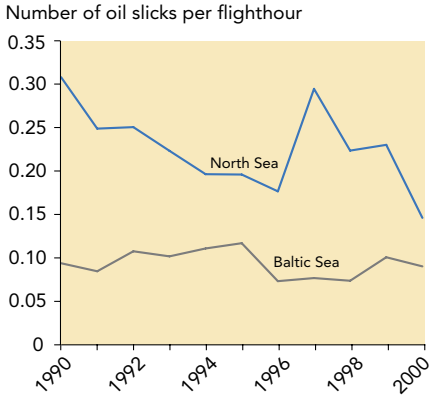
☹ Extension of infrastructure networks is increasing pressures on designated nature areas

☹ The number of detected illegal oil discharges from shipping remains stable in the Baltic Sea and is not monitored in the Black Sea

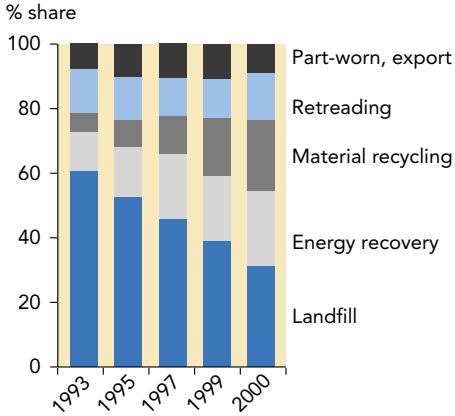
☹ Numbers of end-of-life vehicles and used tyres are expected to grow significantly

Figure 3 **(a) Annual number of observed oil slicks per flight hour in the Baltic Sea and North Sea and (b) treatment of waste tyres in the EU+3**

(a)



(b)



Notes: EU+3 refers to EU and Iceland, Liechtenstein and Norway. Percentages are based on tonnes of tyres.
Sources: Helsinki Convention (http://www.helcom.fi/); Bonn Agreement (http://www.bonnagreement.org); ETRA, 2002.

Are we getting better at managing transport demand and at improving the modal split?

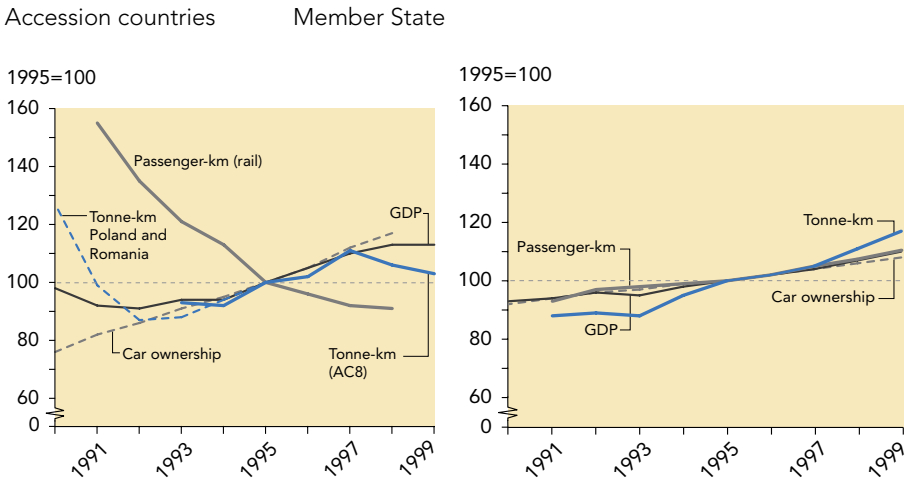
😐 Freight transport intensity (tonne-km transported per unit of economic activity) in the ACs is falling, but is still on average five times higher than in the EU

☹ Freight transport in the ACs is shifting to road, but the share of rail is still much larger than in the EU

❓ Passenger transport is growing in the ACs, but data are insufficient to quantify this

☹ Passenger transport is shifting to road and air, but the share of rail in ACs is still well above the EU average

Transport volumes, GDP and car ownership, 1990–99 Figure 4



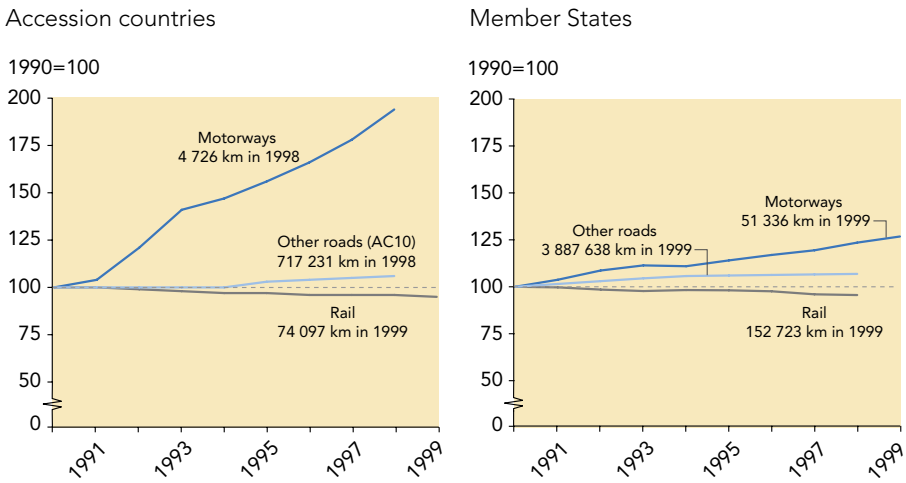
Notes: GDP in 1995 prices. Freight transport includes road, rail and inland waterways. Data for ACs refers to Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovenia. Passenger transport (EU) includes car, bus/coach, rail, tram/metro and domestic, intra- and extra-European aviation. Data on road passenger transport in the ACs are scarce; car ownership is shown as a proxy-indicator.

Sources: UNECE, 2001a; Eurostat, 2002a; World Bank, 2002.

Are we optimising the use of existing transport infrastructure capacity and moving towards a better-balanced intermodal transport system?

- Motorway lengths have almost doubled in 10 years, but AC road density is still lower than in the EU
- The limited data on investments indicate a prioritisation of road investments

Figure 5 **Trends in transport infrastructure length in the ACs and EU, 1990–99**



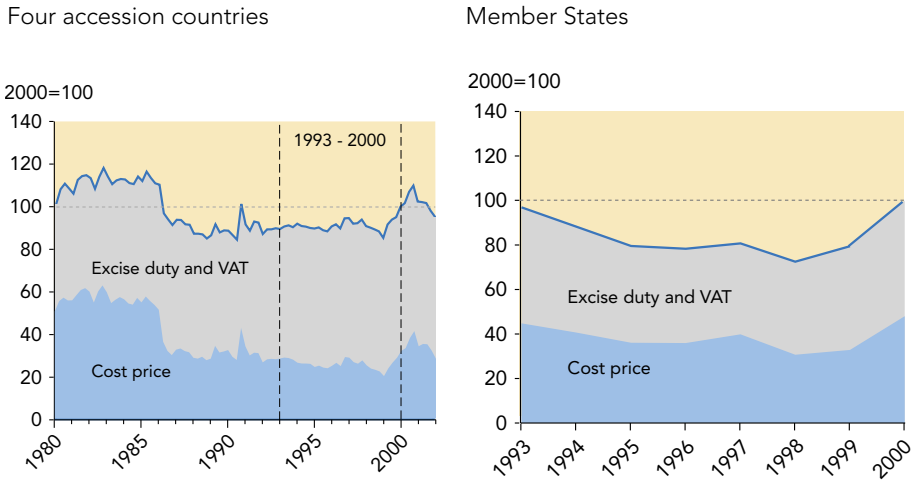
Notes: Road, excluding motorways, is based on AC-10 (excluding Czech Republic, Estonia and Turkey). Oil pipelines and inland waterways remained more or less stable and are therefore left out of the chart.

Source: UNECE, 2001a (and Eurostat, 2002a for gap-filling).

Are we moving towards a fairer and more efficient pricing system, which ensures that external costs are internalised?

- External costs of transport are not yet quantified for the ACs
- Few internalisation instruments are in force in the ACs
- Trends in fuel prices are not encouraging the use of more fuel-efficient transport modes

Weighted average fuel (EU) and diesel (AC) cost price, VAT and excise duties Figure 6



Note: Chart for EU refers to the weighted average price of unleaded petrol and diesel, based on sales figures. As sales figures are not available for the ACs (Czech Republic, Hungary, Poland and Turkey), only diesel is shown. Note also the difference in time period between the two charts.

Sources: IEA, 2001b; Eurostat, 2002b.

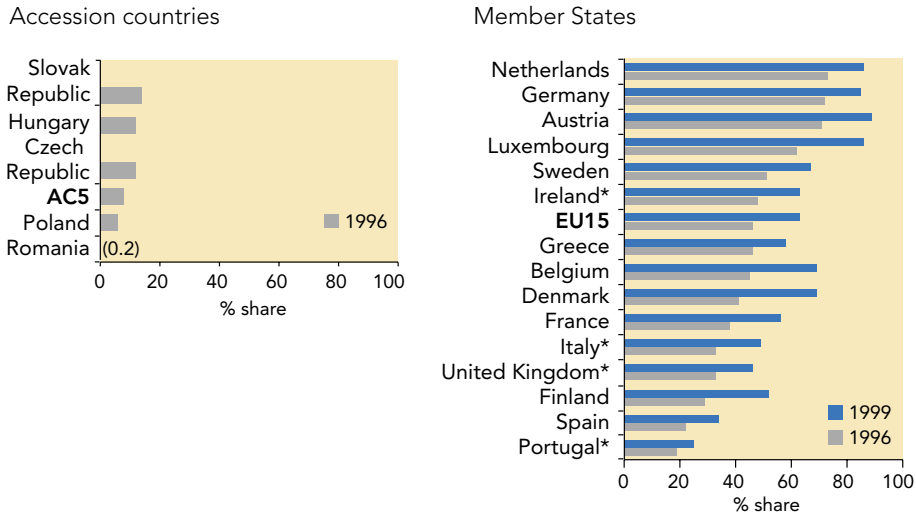
How rapidly are cleaner technologies being introduced and how efficiently are vehicles being used?

No data on energy efficiency are available for ACs; in the EU all modes except rail show some improvement

No data are available for ACs on specific emissions (air pollutant emissions per transport unit) of vehicles; EU road vehicles show significant improvement

The AC vehicle fleet is on average four to five years older than the EU fleet

Figure 7 **Percentage of petrol cars fitted with catalytic converters in ACs (1996) and the EU (1996 and 1999)**



Note : Data from Ireland, Italy, the United Kingdom and Portugal refers to 1996–98 instead of 1996–99.

Sources: Eurostat, 2002a; REC, 1998; UNECE, 2001a.

Are environmental management and monitoring tools being used effectively to support policy-making?

☹ Integrated transport and environment strategies are lacking in ACs

😐 Institutional cooperation on transport and environment is emerging in ACs but is seldom formalised

☹ ACs are not monitoring the environmental integration in their transport policies

😐 A few ACs have legal requirements for strategic environmental assessment, but application in the transport sector is limited to pilot initiatives

Overview of management integration tools in the ACs Table 1

	Integrated T&E strategy	Institutional cooperation	T&E monitoring	Strategic environmental assessment
Bulgaria		✓		✓
Cyprus				
Czech Republic				✓
Estonia		✓		
Hungary				
Latvia		✓*		
Lithuania		✓*	UD	
Malta				
Poland	✓		UD	✓
Romania				
Slovakia	✓	✓		✓
Slovenia			UD	
Turkey				

Notes: ✓ Adopted, present, or in place.
UD Under development.
* Only temporary working groups established.

Sources: EEA, 2001b; REC, 2001.

Next steps

This report highlights substantial data gaps for several indicators, and inconsistencies between data reported to different international organisations. These are more pronounced for the ACs, but statistics are also often incomplete or poor in quality for the current Member States. Concerted action is needed by various international organisations to improve data and their comparability. Countries also need to improve the data flows to these organisations and improve data on rail, water transport, aviation, and non-motorised modes (walking, cycling).

The lack of clear policy targets or objectives against which indicator trends can be evaluated is another difficulty. The transferability of the EU's current policy objectives/targets to its future new member countries may also sometimes be questionable. The communication on environmental objectives for the sector, announced in the White Paper on the common transport policy, could be a good forum for addressing such problems.

Given the wide geographical coverage of TERM and the limited resources available, it may be necessary to focus future work on a more limited range of indicators and to reduce the reporting frequency in order to prioritise work on data and assessments.

The TERM indicator fact sheets form the reference information system of this report and can be do wnloaded from the EEA web site:
http://themes.eea.eu.int/Sectors_and_activities/transport/indicators

Transport and environment related policy documents
The three main policy documents from the European Commission related to TERM are the:

1. Sustainable Development Strategy (SDS)
2. Sixth Environmental Action Programme (6EAP)
3. White Paper on the Common Transport Policy (CTP)

A short list of priorities set in each of these policy documents, which particularly relate to transport, environment and enlargement, is given below.

SDS According to this strategy, the ACs 'should be actively involved in implementing the [sustainable development] strategy'. 'Ensuring sustainable transport' is one of the strategy's priorities. The conclusions of the summit adopting this strategy stress that a sustainable transport system should tackle rising volumes of traffic.

6EAP The sixth environmental action programme's key actions are:
- the full implementation of the environment acquis;
- the adoption of policies and approaches that permit sustainable development, e.g. by promoting strategic environmental assessment (SEA) and mainstreaming environmental objectives and policies into other departments;
- to support alternatives to road, e.g. by the way in which the Community gives financial support;
- to carefully plan road transport so that new developments are not damaging to towns, cities, nature or wildlife.

CTP The White Paper's priorities are:
- the full implementation of the transport acquis;
- to connect the infrastructure of the ACs to that of the EU and further develop infrastructure within the ACs;
- to take full advantage of the available well-developed railway network and know-how to rebalance the modal split in an enlarged Europe.

Comprehensive information on the aims and status of the enlargement process can be found on:
http://europa.eu.int/comm/enlargement/index_en.html

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