

Evaluation of the Common
Transport Policy (CTP) of the EU
from 2000 to 2008 and analysis of
the evolution and structure of the
European transport sector in the
context of the long-term
development of the CTP

D3 - Final Report

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BIBLIOGRAPHY: LIST OF DOCUMENTS CONSULTED THAT ARE NOT LEGISLATIVE ACTS OR LEGISLATIVE PROPOSALS

LIST OF ACRONYMS

ACEA	Association of European Car Manufacturers
AEA	Association of European Airlines
AIS	Automatic Identification System
ASA	Air Service Agreements
ATM	Aviation Traffic Management Systems
BAC	Blood Alcohol Content
CF	Cohesion Fund
COSS	Committee on Safe Seas
CTP	Common Transport Policy
DG TREN	Directorate-General Energy and Transport
DRL	Daytime Running Lights
DSS	Decision Support System
EASA	European Aviation Safety Agency
EC	European Commission
ECSA	European Community Shipowners' Association
EEA	European Environment Agency
EEC	European Economic Community
EGNOS	European Geostationary Navigation Overlay Service
EIB	European Investment Bank
EILU	European Intermodal Loading Unit
EMSA	European Maritime Safety Agency
ERA	European Railway Agency
ERDF	European Regional Development Fund
ERTMS	European Rail Traffic Management System
ESA	European Space Agency
ETCS	European Train Control System
ETF	European Transport Workers' Federation
ETS	European Emission Trading System
ETSC	European Transport Safety Council
EU	European Union
FP	Framework Programme
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GJU	Galileo Joint Undertaking
GNSS	Global Navigation Satellite System
GPS	Global positioning system
GSM-R	Global System for Mobile Communications - Railway
HGV	Heavy Good Vehicles
IATA	International Air Transport Association
ICAO	International Civil Aviation Organisation
ICT	Information and Communication Technologies
IMO	International Maritime Organisation
ISPA	Instrument for Structural Policies for Pre-Accession
ISPS	International Ship and Port Facility Security

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ITF	International Transport Forum
ITS	Intelligent Transport System
IVVS	Intelligent Vehicles Safety Systems
LCC	Low Cost Carriers
LRIT	Long-Range Identification and Tracking System
MLC	Maritime Labour Convention
MS	Member State
NOX	Nitrogen Oxide
PP	Priority Projects
PRM	Passenger with Reduced Mobility
PSC	Public Service Contract
PSO	Public Service Obligations
RIS	River Information Service
SDS	Sustainable Development Strategy
SECA	SOx Emission Control Areas
SES	Single European Sky
SESAR	Single European Sky ATM Research
SME	Small Medium Enterprises
SOLAS	Safety of Life at Sea
SSN	SeaSafeNet
TEN-T	Trans-European Transport Networks
TEN-T EA	Trans-European Transport Network Executive Agency
TERM	Transport and Environment Reporting Mechanism
TOFP	Tropospheric Ozone Formation Precursors
TSI	Technical Standard for Interoperability
UIRR	International Union of combined Road-Rail transport companies

1 Executive summary

Overview of the study

- 1.1 The purpose of this study is to assess the main developments in the European transport sector and of European transport policy between 2000 and 2008, in order to inform the development of policy for the future. The study assesses the extent to which the objectives of the Common Transport Policy (CTP), in particular the objectives described in the 2001 Transport White Paper and the 2006 Mid-Term Review, have been achieved.
- 1.2 In order to do this, we have identified the key policy objectives of the CTP, and analysed the impact of the measures taken at EU level in order to meet these objectives. We have also taken into account other measures that have been taken by the EU and the Member States where these have impacted on the achievement of CTP objectives. The assessment has been carried out for a number of specific policy areas agreed with the Commission, and to support this, we have undertaken case studies of the implementation of CTP measures in three Member States (Germany, Spain and Italy).
- 1.3 The analysis of the CTP has been grouped around three key policy themes:
 - economic aspects of the CTP, such as development of a competitive market for transport services;
 - social aspects of the CTP, such as reduction in accidents and improved service quality; and
 - environmental aspects of the CTP, such as reductions in greenhouse gas emissions and noise.
- 1.4 Our conclusions in each of these areas are described below.

Economic aspects of the CTP

- 1.5 The key objectives relating to economic aspects of the CTP included:
 - development of a competitive internal market for transport, through market opening and liberalisation;
 - facilitation of investment in prioritised transport infrastructure; and
 - reform of infrastructure pricing and taxation to encourage more efficient use of transport infrastructure.
- 1.6 The analysis undertaken shows that substantial progress has been made towards meeting the objective of the CTP of creation of a competitive internal market for transport services, by liberalising the transport market. Market opening has been very successful in the air sector, and there are signs that market opening in the rail sector is starting to bring some success, but it is too early to assess the full results of this, particularly because some Member States have been slow in implementing

the relevant Directives. In other sectors, further reforms are required in order to fully implement liberalisation.

- 1.7 The case study analysis shows that liberalisation of the air market has brought significant consumer benefits, in terms of lower air fares, new air services, and where surface competitors (for example the railways) have offered lower fares to compete. The case studies also show some examples of where new competitive rail freight services have started as a result of liberalisation. However, the studies also demonstrate that realisation of benefits from liberalisation is dependent on full implementation of the relevant legislation by Member States, and that this has not always occurred.
- 1.8 The major lesson learnt from the opening of the market is that introduction of legislation is not in itself sufficient to ensure that markets are opened in practice. In the railways the initial attempts at liberalisation had little impact on the market; only in recent years has there actually been any increase in competition, and this is still limited to niche areas.
- 1.9 Although there has been progress towards the CTP objectives of eliminating infrastructure bottlenecks through the TEN-T programme, progress has been relatively slow, partly due to the scale, complexity and cost of the projects.
- 1.10 In addition, whilst there has been progress towards the objective of introducing a system of transport infrastructure pricing and taxation which better reflects marginal costs, and most of the specific measures proposed in the White Paper have been implemented, overall progress towards meeting this objective has been limited, largely because most decisions about pricing and taxation are still taken by Member States, and in some cases due to strong public opposition.

Recommendations

- 1.11 We recommend that the process of market liberalisation of the transport sector should be continued, in order to meet the CTP objective of a competitive internal transport market. In particular, this should include:
 - Continued effort to liberalise the rail sector, in particular to ensure that all Member States fully implement and enforce the packages of Directives that have already been passed.
 - Full liberalisation of road freight transport, including removal of all restrictions on cabotage as requested by the Parliament. There is no more economic rationale or justification for market restrictions in this sector than there is in the air sector, although (as in the air sector) liberalisation may need to be accompanied by appropriate regulatory measures to ensure maintenance of safety standards and (possibly) working conditions.
 - Removal of remaining restrictions on international road passenger transport, including permitting cabotage.
- 1.12 In order to ensure that the limited TEN-T funds are used most efficiently to address infrastructure bottlenecks, decision-making about the allocation of funding should be based on cost benefit analysis of different schemes, using consistent criteria and parameters, but should not favour specific modes of transport. The different environmental and other social costs of different modes should be taken into account in this cost benefit analysis.

- 1.13 With regard to pricing and taxation, the limited congestion pricing schemes that have been introduced in some Member States have been successful. However, gaining public acceptance of these schemes prior to implementation has proved difficult. The scope of these schemes means that their introduction is within the competence of national and regional governments, in accordance with the principle of subsidiarity, but the EU can continue to promote best practice and may be able to assist with the development of technological solutions for road pricing.

Social aspects of the CTP

- 1.14 The key objectives relating to social aspects of the CTP included:
- improved road safety - in particular a target was set to reduce road fatalities by 50% by 2010;
 - maintenance of the security of the transport system;
 - promotion of passenger rights and mitigation of any negative impact on service quality from increased price competition between operators; and
 - improving conditions for transport workers.
- 1.15 Many actions have been taken towards the objective of improved road safety, but the fatality reduction target is unlikely to be achieved, and there are significant variations in the progress made by different Member States. The experience of the best performing nations suggests that the key to their success has been their commitment to enforcement (drink driving, speeding and seat belts) and investments in infrastructure improvements (for example, to transfer high speed traffic from rural roads to trunk routes).
- 1.16 Significant progress has been made towards the objective of promotion of passenger rights, including introduction of Regulations to improve the protection available to air and rail passengers in the event of disruption to their journeys. Similar Regulations have been proposed for international maritime and bus transport. However, to date, the only Regulations which have taken effect relate to the air sector, and there have been a number of difficulties with the operation and enforcement of these Regulations.
- 1.17 We have undertaken case studies of the implementation of passenger rights legislation in specific Member States, which demonstrates again that achievement of CTP objectives is often dependent on full implementation and enforcement within the Member States. The failure of some Member States to enforce the Regulation on air passenger rights effectively has limited the impact that this could achieve.
- 1.18 Maintenance of transport security has become an important objective of the CTP since the White Paper, due in particular to the terrorist attacks of September 2001. It is difficult to measure whether these measures have been successful, as the main indicator of success is the absence of incidents, and this reflects a number of wider factors.
- 1.19 The enactment of the Common Transport Policy has also led to the introduction of a number of measures aimed at improving the social conditions of transport workers, though its impact has been difficult to assess, either because of lack of data or because it is still early to make such an assessment.

Recommendations

- 1.20 In order to achieve targets for reductions in road fatalities in the future, it will be important to encourage Member States to adopt the right strategies (which could differ between States) and commit themselves to implementing them. In addition, it will be necessary to tackle emerging trends, such as the increasing numbers of motorcyclists killed or injured on the roads.
- 1.21 The EU could also consider a target also for non-fatal injuries. To date, the definition of such a target at the EU level is limited by the availability of data, as there are still differences between Member States' definitions of slight and serious injuries and reporting procedures. Thus, the EU should first encourage Member States to adopt a common definition of slight and serious injuries to foster comparability in official police-reported road accident statistics.
- 1.22 In order to meet the CTP objective of ensuring that liberalisation and competition does not lead to lower service quality or infringement of passenger rights, it will be necessary to take measures to ensure that Member States properly implement the Regulations that have been introduced. We also recommend that there should only be variations in requirements relating to passenger rights between modes where this is objectively justifiable, for example by the different characteristics of each mode.
- 1.23 We also recommend that measures should be taken to improve the information available to users on the service quality offered by different transport operators, so that they can make an informed choice, and (if necessary) trade off different levels of service quality offered by different operators against different levels of price.

Environmental aspects of the CTP

- 1.24 The 1992 White Paper set reduced emissions as amongst the key objectives to be fulfilled by the CTP. Following the Treaty of Amsterdam, environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities.
- 1.25 The environmental aspects of the CTP may be assessed using the objectives of the CTP itself and those of the Sustainable Development Strategy (SDS) of 2001 and of the Renewed SDS of 2006. The SDS objectives are however more of a long-term nature. They are unlikely to have been achieved within the period reviewed and also require actions at national and local level, as well as EU level. The objectives of the CTP as formulated in the 2001 White Paper and its Mid-Term Review of 2006 are more operational.
- 1.26 Both the 2001 White Paper and the 2006 Mid-Term Review promoted a shift in the balance between modes of transport - away from road transport and towards lower emission modes, particularly rail. However, it is important to note that the objectives of the CTP in this area were changed slightly by the Mid-Term Review. The 2001 White Paper targeted modal shift to reverse the growing market share of road transport but the Mid-Term Review qualified this target to seek modal shift only where appropriate, such as over long distances, on congested corridors and in urban areas.
- 1.27 The objective of the 2001 White Paper of modal shift towards rail transport has not been achieved, if measured in terms of total transport demand across the EU. However, the relative decline of rail freight does appear to have stopped, and there

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has been some progress towards meeting the objective of the Mid-Term Review of modal shift where this is appropriate. Rail market shares have increased significantly on individual corridors, such as Madrid-Barcelona, although it is not possible to assess this in detail, because rail operators usually do not publish route-specific traffic statistics.

- 1.28 The 2001 White Paper also emphasised decoupling transport demand growth from GDP growth, but the Mid-Term Review emphasised decoupling demand growth from negative effects such as greenhouse gas emissions.
- 1.29 The objectives of the 2001 White Paper relating to decoupling of freight transport growth from GDP growth, and reduction in transport emissions, have not been achieved to date. The objective of decoupling passenger transport growth from GDP growth has been achieved, to the extent that demand growth is slower than GDP growth, but this was also the case before 2001 and there is no clear evidence that the relationship between transport growth and GDP growth has changed. Stronger decoupling has been prevented by greater demand for passenger and freight transport due to globalisation and EU enlargement, and reduction in some transport prices (for example due to the growth of low cost airlines).
- 1.30 However, there has been some progress towards meeting the objective set in the Mid-Term Review of decoupling the growth of transport from its negative effects. Although greenhouse gas emissions from transport have continued to rise, the growth has been slower than traffic growth, primarily due to progress on fuel efficiency, particularly of road vehicles. A substantial reduction in transport emissions would require a shift away from fossil fuels, but there has been little progress on this and few indications that it will occur in the short to medium term.
- 1.31 The EU has also sought to reduce pollutant emissions (such as NO_x and PM₁₀), and improve local air quality. Although there has been a significant reduction in total pollutant emissions, there are still high concentrations of pollutant emissions at many sites close to major congested roads, particularly in cities.
- 1.32 The case study of environmental sustainability measures in Member States that has been undertaken for this study shows again that the achievement of CTP objectives is strongly dependent on actions taken by Member States. Germany has made significant progress towards meeting the CTP environmental sustainability objectives in the transport sector, largely as a result of national policy measures, but progress has been more limited in the other case study States (Spain and Italy).
- 1.33 To tackle maritime pollution, various measures have been introduced such as the gradual elimination (phasing out) of the fleet of single-hull tankers and replacing these by double hull tankers; encouragement of the use of shore-side electricity; and the introduction of sanctions for those responsible of causing oil spills or other ship-source type pollution. These measures have helped prevent major accidents and related pollution. However, more needs to be done to tackle pollutant and GHG emissions from ships which have increased considerably in recent years.

Recommendations

- 1.34 In the future, the EU could build on what has been done in the research and development of cleaner fuels and vehicles, and strengthen its efforts to support the development and adoption of new cleaner technologies in the transport market: reducing emissions by passenger kilometre of the different transport modes is one of

the key strategy to tackle climate change, as highlighted by a recent report of the IPCC¹.

- 1.35 Other options which could be considered include measures to reduce motorised travel and encourage more sustainable travel choices, such as road user charges and “smarter choices” measures (such as workplace and school travel plans; personalised travel planning; information and marketing; travel awareness campaigns; teleworking; teleconferencing and home shopping).
- 1.36 Policy measures should in general target overall reductions in emissions rather than specifically mode shift. In particular, projects which seek to reduce emissions by shifting traffic to rail may succeed in reducing emissions from other modes, but if the rail service offer is improved, total transport demand and rail emissions will increase. The net result may be a reduction in emissions but this depends on the scale of any new demand generated, the mode any switch was from, and the type of traffic. For example, if a new high speed rail line captures traffic from airlines, this would lead to a reduction in emissions, but this could be offset by additional emissions from new demand generated and transfer of traffic from conventional rail, which produces lower emissions than high speed rail². The benefits from shifting short distance urban trips to rail or other forms of public transport are likely to be greater, in part because car occupancy tends to be lower for these trips and therefore emissions per passenger are higher.
- 1.37 In the longer term, the integration of land use and transport planning should help manage the demand for transport in Europe’s towns and cities. Spatial planning can facilitate walking, cycling and the use of public transport for the majority of travel purposes, thereby reducing the negative impacts on the environment of private vehicle use and provide social and economic benefits.
- 1.38 Finally, the availability of reliable and up-to-date transport data is a crucial element to define transport strategy and take actions to achieve the objectives of the CTP. Although significant progresses have been made in this direction (for example the development of TERM indicators), there is still an acute lack of data on which to base transport policy, except in a sub-set of Member States. This applies particularly to the measurement of congestion across Member States, and data for non-motorised transport passenger demand. In addition, the fact that most rail operators do not publish route-specific traffic statistics makes it difficult to evaluate whether policies which have encouraged mode shift on specific corridors have been successful. Given the significant amounts of public funding directed to rail projects, the EU could consider requiring operators which have benefited from this funding to publish more detailed traffic statistics.

¹ IPCC Fourth Assessment Report: Working Group III Report "Mitigation of Climate Change", Ch 5, Transport and its infrastructure (<http://www.ipcc.ch/ipccreports/ar4-wg3.htm>)

² See To shift or not to shift, that is the question: The environmental performance of the principal modes of freight and passenger transport in the policy-making context; CE, Delft 2003

2 Introduction

Background

- 2.1 A Common Transport Policy (CTP) was first proposed in the Treaty of Rome (1957). However, Member States were initially unwilling to give up national control of the transport sector, and although a number of transport policy proposals were made by the Commission, only minimal measures were taken until after a European Court of Justice ruling in 1985 that the Council had failed to act. Later on, the Single European Act (1986) laid down the basis for the establishment of the single market, including single markets in transport services, and the Maastricht Treaty reinforced the political, institutional and budgetary foundations for the CTP.
- 2.2 There are three key policy documents which have set out the objectives of the CTP and the measures to be taken in order to achieve these objectives:
- In December 1992 the Commission published its first White Paper on ‘The future development of the common transport policy’ (COM(92) 494 final), which emphasised the opening and integration of the EU transport market.
 - In September 2001 the Commission published a new White paper - ‘European transport policy for 2010: time to decide’ [COM(2001)370], which stressed the importance of shifting the balance between modes of transport, eliminating bottlenecks, placing users at the heart of transport policy and managing the effects of globalisation.
 - In 2006, the Commission published a Mid-Term Review of the 2001 White Paper ‘Keep Europe moving - sustainable mobility for our continent’ [COM(2006)314], which drew attention to the changes occurred in the context since 2001, such as EU enlargement, greater concerns about security and terrorism, the acceleration of globalisation, international commitments to fighting global warming and rising energy prices.
- 2.3 In addition, transport policy objectives have been set out in a number of other policy documents, such as the Sustainable Development Strategy adopted in 2001 and the Renewed Sustainable Development Strategy that was agreed in 2006.
- 2.4 As indicated in the Mid-Term review, the Commission will report on long-term trends in transport policy including transport scenarios with a 20 and 40 year horizon. This report is about to be drafted and should be adopted in mid-2009. It should include a short overview of the current situation of the European transport market and an evaluation of the CTP since 2001..

Scope of the study

- 2.5 Steer Davies Gleave is pleased to present this Final Report for the study “Evaluation of the Common Transport Policy (CTP) of the European Union (EU) from 2000 to 2008 and analysis of the evolution and structure of the European transport sector in the context of the long-term development of the CTP”.

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- 2.6 The purpose of this study is to assess the main developments in the European transport sector and of European transport policy between 2000 and 2008, in order to inform the development of policy for the future. The study assesses the extent to which the objectives of the CTP, in particular the objectives described in the 2001 Transport White Paper and the 2006 Mid-Term Review, have been achieved.
- 2.7 In order to do this, we have identified the key policy objectives of the CTP, and analysed the impact of the measures taken at EU level in order to meet these objectives. We have also taken into account other measures that have been taken by the EU and the Member States where these have impacted on the achievement of CTP objectives.
- 2.8 The study also considers the influence on transport policy of major events and trends that have occurred since 2001, such as increased globalisation and the enlargement of the EU.

The structure of this report

- 2.9 As required by the Terms of Reference (TOR), this Final Report includes the findings, analysis, conclusions and recommendations.
- 2.10 The remainder of this report is structured as follows:
- Chapter 3 provides a summary of the methodology;
 - Chapter 4 summarises the objectives of the CTP, the measures taken in order to meet these objectives, the results of these measures in policy areas relating to the economy, as well as key lessons learnt;
 - Chapter 5 does the same for the social policy objectives of the CTP;
 - Chapter 6 is the equivalent for the environmental policy objectives of the CTP; and
 - Chapter 7 provides a summary of the assessment of the policy measures.
- 2.11 The following information is provided as Appendices. Due to the amount of information provided, these are provided as separate documents:
- Appendix A contains reports for the ten specific policy areas considered for the study (Task 1) and
 - Appendix B contains reports for the three country case studies (Task 2).

3 Research Methodology

Introduction

- 3.1 This section summarises the research approach that has been used for this study. This methodology was described in detail in the Inception Report and discussed at initial and interim meetings undertaken with the Commission.
- 3.2 Our approach has been based on a review of legislation, legislative proposals, existing literature and statistical data. The detailed reports provided in appendix A and B all list the sources that have been used, and a full list of the sources used - apart from legislative acts and legislative proposals - is provided at the end of this report.

Overview of the approach

- 3.3 The approach agreed with the European Commission for this study was to analyse the implementation of the CTP in each of ten policy areas (Task 1). This has been supplemented by more detailed analysis of the implementation of three of these policy areas in three Member States (Task 2). This report summarises the conclusions of this analysis, grouped into three broad themes (the economy, the society, and the environment).
- 3.4 The purpose of Task 1 was to evaluate to what extent the measures taken have been effective in achieving the objectives set in the 2001 White Paper and the 2006 Mid-Term Review³. The policy areas covered in Task 1 are:
- Task 1.1: Market opening, regulation and enforcement;
 - Task 1.2: The planning and financing of trans-European transport networks;
 - Task 1.3: Logistics, inter- and co-modality (including Marco Polo);
 - Task 1.4: Pricing and taxation;
 - Task 1.5: Safety and security measures;
 - Task 1.6: Social aspects;
 - Task 1.7: Level of service quality and user aspects such as passenger rights;
 - Task 1.8: Environmental sustainability and transport-related energy issues;
 - Task 1.9: Urban transport; and
 - Task 1.10: Intelligent transport systems and other transport-related research outcomes.

³ Keep Europe moving: Sustainable mobility for our continent; Mid-term review of the European Commission's 2001 Transport White paper, 2006.

- 3.5 The purpose of Task 2 was to assess the implementation of specific areas of the CTP in a sample of Member States. The three selected case studies were:
- Task 2.1: Italy, a large Member State, ranking 4th within EU27 for number of inhabitants and 7th for territorial dimension;
 - Task 2.2: Spain, a Member State that has received a substantial share of European funds since 2001;
 - Task 2.3: Germany, as it is the largest Member State in terms of population, and due to its central geographical position (not least, connecting the EU15 with the New Member States).

Areas of analysis: from a deeper to a broader perspective

- 3.6 Research and analysis has been undertaken in each of the ten areas of intervention agreed with the Commission. The findings have then been consolidated into three themes:
- **Economy:** Issues relating to the efficiency and competitiveness of the transport market.
 - **Society:** The impacts of the transport system on people, including employees, passengers, and wider society.
 - **Environment:** The environmental sustainability of the transport system.
- 3.7 There are inevitably links between these issues. For example, actions taken to improve transport economic efficiency, such as the opening of the rail market, could also impact on the environmental sustainability of the transport system, if they induce a change in the usage of the (more sustainable) rail mode. Similarly, measures aimed at improving working conditions for truck drivers might have a negative impact on the economy (by increasing costs) but lead to fairer competition between road and rail transport, as rail transport already has extensive regulations on these issues. However, the three areas are intended to facilitate a simple overview of the objectives and achievements of the CTP.

Evaluation methodology

- 3.8 To conduct the evaluation we have identified:
- the **objectives** of the CTP;
 - the **legislative measures** and other **initiatives** proposed or implemented, which seek to meet the objectives of the CTP;
 - **indicators**, distinguished by outcome and output indicators, to be used for the quantitative assessment of the previous measures.
- 3.9 The sources that have been used to undertake the evaluation include policy documents and reports from the European Commission and other EU institutions and agencies. We have also drawn on evaluation studies that have been undertaken on behalf of the Commission, in particular, the INDIC (2004) and the ASSESS (2005) studies provided a general background for the evaluation of the CTP up to 2005.

Objectives

- 3.10 The objectives of the CTP for the period of analysis (2000-2008) have been derived from a number of sources, including the 2001 White Paper and the 2006 Mid-Term Review, but we have also taken into account other policy documents such as the Renewed Sustainable Development Strategy that was agreed in 2006. It should be noted that, over this period, there has been a gradual shift in some Community policy objectives, including the objectives of the CTP, and therefore in some cases it is too early to assess whether the objectives have been achieved.
- 3.11 We have identified the overarching goal of the CTP as being **the promotion of an efficient, sustainable, safe and secure transport system capable of enabling trade and mobility whilst minimising costs for users and society as a whole.**
- 3.12 We have also identified several operational objectives, which contribute towards meeting this overarching goal. The key objectives include (amongst others):
 - a competitive internal market for the provision of transport services;
 - support for investment in prioritised transport facilities;
 - improved safety and security; and
 - environmental sustainability.
- 3.13 These operational objectives have been mapped to the three main themes of analysis described above (the economy, society and the environment), as shown in Table 3.1. More detail on these operational objectives is provided in each of the following sections.

TABLE 3.1 COMMON TRANSPORT POLICY OBJECTIVES

	Objectives	Theme
1st group	Competitive internal market for transport; support of investment in prioritised transport facilities and innovative technology; support to international cooperation (enlargement and globalisation)	Economy
2nd group	Social protection; safe and secure transport system; protection of passenger rights	Society
3rd group	Environmental sustainability of transport	Environment

Measures

- 3.14 The next stage was to identify the legislative measures and other initiatives taken or proposed by the EU to make progress towards these objectives. Detailed research has been undertaken within each of the policy areas agreed with the Commission (Task 1). This was then synthesised in the assessment provided for the three major themes (economy, society and environment) described in this report.
- 3.15 A total of 88 measures have been identified. Most of these are derived from the White Paper or the Mid-Term Review, but a limited number relate to actions taken in other EU policy areas that interact with transport, such as environmental and taxation policies.

- 3.16 The measures have been categorized according to the primary policy areas they refer to, as well as linked to the other policy areas they impact on, as shown in Table 3.2. This table shows also how these have been mapped to the broad policy themes that have been identified. In particular, for each measure, we have identified whether this had a high, medium or low potential impact against the objectives listed in Table 3.1.

TABLE 3.2 COMMON TRANSPORT POLICY MEASURES AND OBJECTIVES

	N#	Measure	Mode	POLICY AREAS										OBJECTIVES			THEME		
				Priority area for measure and linked ones										Relevance of measure for objectives			Priority Theme		
				1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1st group Economy	2nd group Society	3rd group Environment			
Task 1.1	1	Improving the framework conditions for market opening in rail freight transport	Rail	X												High		Low	Economy
	2	Opening up the national and international rail freight market	Rail	X												High		Medium	Economy
	3	Opening up the international passenger rail market	Rail	X												High		Medium	Economy
	4	Updating interoperability directives on high speed and conventional railway networks	Rail	X												High			Economy
	5	Creation of the European Railway Agency (ERA)	Rail	X												High	Medium		Economy
	6	Standardise certification of train crews and trains on the rail network	Rail	X												High	Medium		Economy
	7	Harmonise clauses in commercial road transport contracts	Road	X												High	Medium	Low	Economy
	8	Entering into air service agreements with third countries	Air	X												High			Economy
	9	Propose a common legal framework for the provision of port services	Maritime	X												High	Medium	Low	Economy
	10	Monitoring of state aid in transport sector	All	X												High	Low		Economy
	11	Single European Sky	Air	X												High	Low	Medium	Economy
	12	Improve capacity allocation in the air sector (common rules for slot allocation)	Air	X												High		Medium	Economy
	13	Protection against subsidisation and unfair pricing practices in the supply of air services from third countries	Air	X												High			Economy
	14	Transfer of ship register	Maritime	X												High			Economy
	15	Simplify the regulatory framework for maritime and inland waterway transport	Maritime	X												High		Medium	Economy
	16	Greater harmonisation of boatmasters' certificates	IWW	X												High		Medium	Economy
	17	Improve regulatory framework for local transport (Public Service Contracts)	LPT	X												High	Medium	Medium	Economy
	18	PSO to grant access to public transport for social purposes	All	X												High	Medium		Economy
Task 1.2	19	Develop transport network and remove bottlenecks for rail and road freight and passenger transport	All		X											High		Low	Economy
	20	Air capacity expansion	Air		X											High		Medium	Economy
	21	Motorways of the sea	Maritime		X											High		Medium	Economy
	22	Improve the navigability of key European inland waterways	IWW		X											High		Medium	Economy
	23	Ensure appropriate funding for TEN-T	All		X											High			Economy
	24	Funding infrastructure in the New Member States	All/Enlarg.		X											High	Medium		Economy

	N#	Measure	Mode	POLICY AREAS									OBJECTIVES			THEME	
				Priority area for measure and linked ones									Relevance of measure for objectives			Priority Theme	
				1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1st group Economy	2nd group Society	3rd group Environment		
Task 1.3	25	Improving quality of the rail freight service	Rail			X							High		Low	Economy	
	26	Implement funding programmes (Marco Polo I and II) to sustain intermodality	All			X							High		Medium	Economy	
	27	Promote the development of freight integrators	All			X							High		Medium	Economy	
	28	Promotion of urban transport practices for goods transport	All			X							Medium		High	Environment	
Task 1.4	29	Produce a Framework Directive on infrastructure pricing principles	All				X						High			Economy	
	30	Launch a consultation process on smart charging for infrastructure use	Road				X						High			Economy	
	31	Methodology for the assessment of external costs for calculation of charges	All				X						Medium		High	Environment	
	32	Produce a Directive to guarantee the interoperability of tolling systems	Road				X						High			Economy	
	33	Uniform taxation for commercial road transport fuel by 2003	Road				X						Medium		High	Environment	
	34	Produce a Directive on energy products with exemption of hydrogen and biofuels	Road				X								High	Environment	
Task 1.5	35	European Road Safety Action Programme	Road					X							High		Society
	36	Reduction of road fatalities: vehicle technical progress	Road					X							High	Medium	Society
	37	Reduction of road fatalities: drawing-up of technical guidelines concerning infrastructure safety	Road					X							High		Society
	38	Reduction of road fatalities: harmonisation of road safety checks, penalties and training	Road					X							High	Medium	Society
	39	Harmonisation of driving licences	Road					X							High		Society
	40	Harmonisation of minimum safety standards in tunnels	Tunnels					X							High		Society
	41	Developing accident data collection, analysis and dissemination	Road					X						Medium	High		Society
	42	Creation of a common regulatory framework for railway safety	Rail					X						Medium	High		Society
	43	Creation of the European Aviation Safety Agency (EASA)	Air					X						Medium	High		Society
	44	Safety of third country aircraft	Air					X							High		Society
	45	European Maritime Safety Agency and safety rules for passenger ships	Maritime					X						Medium	High	Medium	Society
	46	Port state controls	Maritime					X						Medium	High	Medium	Society
	47	Ship and port facility security	Maritime					X							High		Society
	48	Security rules at airports	Air					X							High		Society
	49	Enhancing supply chain security	Road/rail					X						Medium	High	Medium	Society

	N#	Measure	Mode	POLICY AREAS										OBJECTIVES			THEME
				Priority area for measure and linked ones										Relevance of measure for objectives			Priority Theme
				1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1st group Economy	2nd group Society	3rd group Environment	
Task 1.6	50	Social harmonisation of road transport	Road					X						Medium	High	Medium	Society
	51	Training for professional drivers	Road					X						Medium	High	Medium	Society
	52	Introduction of the digital tachograph	Road					X						Medium	High		Society
	53	Social legislation inland waterway transport	IWW					X						Medium	High		Society
	54	Training for seafarers	Maritime					X						Medium	High	Medium	Society
Task 1.7	55	Publish information on the performance of different airlines	Air							X				Medium	High		Society
	56	Improve passenger protection in case of denied boarding, delays or cancellations	Air							X				Medium	High		Society
	57	Ensure conditions of contract are fair	Air							X				Medium	High		Society
	58	Improve enforcement of passenger rights	Air							X				Medium	High		Society
	59	Improve protection of passengers with reduced mobility	Air							X				Medium	High		Society
	60	Extend passenger rights to other transport modes	All							X				Medium	High		Society
Task 1.8	61	Euro emission standards	Road									X				High	Environment
	62	Air quality directive	All/Road									X				High	Environment
	63	Ensuring that pricing and taxation mechanisms better reflect vehicles environmental and health damages	Road									X				High	Environment
	64	Promote the use of clean vehicles in urban public transport	LTP									X				High	Environment
	65	Double hull oil tankers, penal sanctions for ship source pollution and other measures to limit maritime pollution	Maritime									X		Medium		High	Environment
	66	Oil pollution damage compensation fund	Maritime									X				High	Environment
	67	Sulphur content of marine fuel	Maritime									X				High	Environment
	68	Community support for noise charges and introduction of noise-related operating restrictions at Community airports	Air									X		Medium		High	Environment
	69	Reduction at source and other actions to reduce noise in the rail sector	Rail									X		Medium		High	Environment
	70	EU noise standards and other measures to reduce noise externalities in the road sector	Road									X				High	Environment
	71	Promotion of biofuels in road transport	Road									X				High	Environment
	72	Measure to reduce CO2 emissions from cars	Road									X				High	Environment
	73	Rules on vehicle labelling to promote most energy-efficient vehicles	Road									X				High	Environment
	74	Inclusion of aviation in the ETS and other measures	Air									X				High	Environment

N#	Measure	Mode	POLICY AREAS										OBJECTIVES			THEME				
			Priority area for measure and linked ones										Relevance of measure for objectives							
			1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	1.10	1st group Economy	2nd group Society	3rd group Environment	Priority Theme				
Task 1.9	75	Recommendation on the promotion of the shore-side electricity for use by ships at berth in EU ports	Maritime										X				High	Environment		
	76	R&D in transport energy efficiency and in reduction of reliance on fossil fuels	All										X				High	Environment		
	77	Support for pioneering towns and cities - CIVITAS	Urban											X			High	Environment		
	78	Promotion of research and furthering experience	Urban											X			High	Environment		
	79	Publication of Green Paper on urban transport	Urban											X			High	High	High	ALL
Task 1.10	80	Consultation following Green Paper on urban transport	Urban											X			High	High	High	ALL
	81	Publication of Action Plan on urban mobility	Urban											X			High	High	High	ALL
	82	ITS in air transport	Air												X		High	High	High	ALL
	83	ITS in maritime transport	Maritime												X		High	High	High	ALL
	84	ITS in rail transport	Rail												X		High	High	High	ALL
	85	ITS in road transport	Road												X		High	High	High	ALL
	86	ITS in inland waterways	IWW												X		High	High	High	ALL
	87	Galileo	All												X		High	High	High	ALL
	88	ICT in specific areas: freight transport and urban passenger transport	All												X		High	High	High	ALL

Legend	
POLICY AREAS	
1.1	Market opening, regulation and enforcement
1.2	Trans-European transport networks
1.3	Logistics, inter- and co-modality
1.4	Pricing and taxation
1.5	Safety and security measures
1.6	Social aspects
1.7	Level of service quality and user aspects
1.8	Environmental sustainability and transport-related energy issues
1.9	Urban transport
1.10	ITS and transport-related research outcomes
Priority area for measure and linked ones	
X	
OBJECTIVES	
1st group Economy	Competitive internal market for transport; support of investment in prioritised transport facilities and innovative technology; support to international cooperation (enlargement and globalisation)
2nd group Society	Social protection; safe and secure transport system; protection of passenger rights
3rd group Environment	Environmental sustainability of transport
Relevance of measure for objectives	
High	High relevance of measure for objectives
Medium	Medium relevance of measure for objectives
Low	Low relevance of measure for objectives

- 3.17 The next stage was to investigate which measures had actually been taken, and which had been postponed or abandoned. We have categorised the outcome of each measure on the following basis:
- **Done:** The measure has been approved, and/or the action has been taken.
 - **Some progress:** This means that progress has been made but the measure has not been (fully) implemented. For example, this could mean that some actions have been taken but others were not, or that legislation has been proposed but not yet enacted.
 - **Not done:** The measure was not approved, or no action has been taken.
- 3.18 This summarises the extent to which actions have been taken at EU level to make progress towards the achievement of the CTP objectives. However, the categorisation does not in itself provide any information on the extent to which each of these measures could effectively contribute to the achievement of the CTP objectives. There are significant differences in this respect: for example, the measures “promotion of freight integrators” and “the opening up of the international and national rail freight market” contribute towards meeting the same objectives but the potential impact of the measures is very different.
- 3.19 A summary of this categorisation is reported in sections 4-6 of this report, which discuss the actions taken for each of the main themes of economy, society and environment. These sections describe also whether the measures took origin from the 2001 White Paper and the 2006 Mid Term Review, or if they derived from previous CTP policy documents (such as the 1992 Transport White Paper) or other EU policies with implications for transport (such as environmental policy).

The impact of the measures in achieving CTP objectives

- 3.20 The next step was to assess the overall effectiveness of these measures in achieving CTP objectives. For each of the key policy objectives discussed in sections 4-6, we outline the extent to which the objectives have been achieved and whether the measures have contributed towards this. This assessment was undertaken largely on the basis of published studies, the experience of the experts who contributed to this study, and data analysis.
- 3.21 It should be emphasised that the assessment of the effectiveness of individual measures is limited as it is not possible to demonstrate what would have occurred if the policy measures had not been implemented (the counterfactual scenario). This required undertaking a more general assessment on the basis of other studies or of our experience in the field of analysis. In addition, for some areas it was too early to produce such an evaluation.
- 3.22 Where possible, to guide our assessment, we have identified output and outcome indicators to evaluate the impact of each measure. For instance, in the safety and security area, the proportion of drivers tested for alcohol provides an example of outcome indicators used, while the trend of road fatalities is the related output indicator. However, it has been possible to identify only a limited number of suitable outcome or output indicators, for two main reasons:

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- some policy areas, such as urban mobility and levels of service quality, are inherently difficult to measure in quantitative terms; and
 - in some other areas, where measures have been recently introduced, it is too early to use indicators to assess the results.
- 3.23 We have also identified that in a number of areas, the achievement of CTP objectives is dependent on measures taken by Member States. These could be:
- implementation and enforcement of EU legislation; and/or
 - development of policy in areas which are within the competencies of Member States (for example, relating to taxation), but which still contribute towards CTP objectives.
- 3.24 Sections 4-6 below identify a number of examples of where this has been an issue, and case studies of the implementation of three specific policy areas in three Member States are provided in appendix B.

Templates for analysis

- 3.25 The analysis of each policy measure has used templates agreed with the Commission and included in the Inception Report. However, these have been adapted to the type of analysis required for the policy area under study. To present the evaluation results in a clear and concise way, this Final Report has been organized around the three major themes identified above.
- 3.26 Similarly, Task 2 templates have been adapted to address the following questions:
- Specific measures taken by the Member State to enforce EU legislation in that policy area;
 - Other policy measures undertaken by the Member State relating to that policy area; and
 - The impact of the policy measures within the country.
- 3.27 Task 1 and Task 2 reports are annexed in Annex A and Annex B respectively.

4 The economic aspects of the CTP

- 4.1 This section summarises the conclusions of the analysis of progress towards the objectives of the CTP relating to economic issues. The key economic objectives were:
- development of a competitive internal market for transport, through market opening and liberalisation;
 - facilitation of investment in prioritised transport infrastructure;
 - promotion of innovative technologies;
 - development of logistics and promotion of inter and co-modality; and
 - reform of infrastructure pricing and taxation to encourage more efficient use of transport infrastructure.
- 4.2 The implementation of measures in these areas was also intended to shift the balance between different modes of transport, in particular, towards the railways. This was partly for environmental reasons and therefore the results of this are discussed in section 6 below.
- 4.3 Within each of these areas, we discuss what objectives the CTP sought to achieve, what measures have been taken, and whether these have been successful in meeting the objectives.

A competitive internal market for transport

Objectives

- 4.4 A longstanding objective of the CTP has been to achieve a competitive internal market for transport, allowing free transit of goods and people within the EU, in order to support the single market. The key objectives have been:
- eliminating any national bias hindering the free transit of passenger and goods; and
 - promoting liberalisation and competition within the national transport markets, in which many transport services have traditionally been provided by monopolies or oligopolies.
- 4.5 Before and after the 1992 White Paper, liberalisation was introduced and enforced in transport modes (maritime, air and road) which were already exposed to some degree of competition. Some measures had also been taken to reform the rail sector, but this was given an increased priority in the 2001 White Paper, as part of the overall objective of revitalising the railways, because rail was seen as more environmentally friendly and a possible means of reducing congestion on trunk roads. Stopping the relative decline of rail transport was therefore a key objective.
- 4.6 The rest of this section analyses the extent to which the objective of achieving a competitive transport market has been achieved, within in each of the key transport sectors.

*Air transport**Measures taken*

- 4.7 Market opening in the air sector in the EU followed a similar deregulation process to that in the USA in the 1970s. Three liberalisation packages were implemented (in 1988, 1990 and 1992) before the adoption of the 2001 Transport White Paper. These packages established open access competition, both for international and national services in the EU. There were a few exceptions, the most important of which was that Member States could procure services using Public Service Obligations where necessary (according to a set of guidelines). The liberalisation of air transport was very successful, although the resulting market growth has exacerbated capacity constraints at airports and in air traffic management. It has also been necessary for the Commission to take measures to ensure the market functions properly (for example, regarding state aids and indirect discrimination between carriers).
- 4.8 In relation to extra-EU services, following the open skies decisions by the European Court of Justice⁴, all bilateral agreements needed to be brought into line with EU law. Furthermore, EU-wide arrangements were necessary with some areas. Regulation (EC) 847/2004 was issued, laying down a set of principles designed to ensure that Member States do not infringe EU law in regard to non-discriminatory market access to routes between Member States and third countries. More importantly, the Court of Justice defined the competence of the EU in relation to:
- direct negotiation of ASAs (Air Service Agreements) with third countries;
 - setting standard clauses to be inserted in any agreement negotiated or in place between a Member State and a extra-EU country.
- 4.9 With Decision 2007/339/EC, the European Union approved the ‘Open Skies’ agreement concluded with the USA, which provides for all transatlantic routes to be opened up to all European and American carriers. It also includes an arrangement to develop the agreement further on matters such as airline ownership.
- 4.10 Following the strategy outlined in the 2001 White Paper, the Commission has also started to pursue policies aimed at improving the efficiency of the air sector and reducing its environmental impact. In particular, the Single European Sky (SES) policy has sought to improve the efficiency of the air traffic management system (commonly known as air traffic control) in order to increase capacity, reduce costs, and allow more direct routes (and hence reduce GHG emissions).

Impact of the measures

- 4.11 Market opening has been a great success in terms both of economic efficiency and benefits to the final users. Average fares have dropped, new direct routes have been launched, and new types of services have been launched - for example low cost services. Low cost carriers offer fares that are on average around 50% lower than those charged by the legacy carriers, and market entry by low cost carriers has also prompted legacy carriers to reduce their prices. This has had a significant benefit in terms of increased mobility and social cohesion within the EU.

⁴ On 5 November 2002, the Court of Justice made a number of judgments in cases referred to it by the Commission (C-466-469/98, C-467/98, C468/98, C-469/98, C-472/98, C-475/98 and C-476/98).

- 4.12 However, some of the other measures taken in this sector have had limited success to date:
- Although bilateral Air Service Agreements with some third countries have been amended in order to open the market to competition, others have not as yet. This is in any case constrained by the policies of the third countries: some, for example Russia, impose market restrictions in order to protect their own national carriers from competition from more efficient EU-based carriers.
 - The Single European Sky initiative has started to address the fragmentation of airspace design and air navigation service provision, but the impact has been slower than expected. As a result, the Commission has recently proposed, and the Council has approved, the SES II initiative, to further improve the performance of the air traffic management system. In particular this includes measures to incentivise air navigation service providers to improve their economic and operational efficiency.
 - The system of slot allocation at congested airports protects the position of incumbent carriers, as slots are allocated on the basis of grandfather rights.
- 4.13 In addition, the growth in air transport volumes as a result of liberalisation has exacerbated capacity constraints at major airports and in air traffic management, and increased the environmental impact of the sector.

Rail transport

Measures taken

- 4.14 One of the main objectives of the 2001 White Paper was the revitalisation of railways, to be pursued in order to attain modal shift from road, both for passenger and freight transport. In the previous decades, rail volumes were declining and market share was falling. The opening up of rail transport to regulated competition was seen as the fundamental stepping stone to reverse this trend. Liberalisation was preceded by the restructuring of incumbent rail operators, prompted by Directive 91/440/EC, which imposed the separation of infrastructure and operations.
- 4.15 The policy has been to gradually introduce liberalisation and competition, via several Packages of Directives (the first of which was introduced few months ahead the adoption of the 2001 White Paper). The first services to be liberalised were international freight services on the Trans European Rail Freight Network, followed by other international freight services and domestic freight services (from January 2007). International passenger services will be liberalised from 2010 but domestic passenger services have been liberalised only in a small number of Member States and to date there is no requirement to do so in European law.
- 4.16 A number of other measures have been taken to improve the efficiency of the rail market and facilitate new entry:
- Technical Standards for Interoperability (TSIs) have been introduced, in order to standardise the rail system and thereby decrease operating costs and make rail more competitive with road transport.
 - Administrative barriers to entry have been reduced, with requirements for separation of licensing and safety certification from train operation, and

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requirements for Member State to introduce regulatory bodies independent of operators and infrastructure managers to ensure that there was no discrimination on the networks.

- A European Railway Agency (ERA) has been created, with the goal of creating an integrated railway area focusing on safety and interoperability.
- Each Member State has been required to create an independent rail safety authority.
- A common train driver licence has been introduced.

Impact of the measures

- 4.17 Rail freight has now been liberalised, but liberalisation of international passenger services will not commence until 2010 and there are no definitive plans as yet for liberalisation of domestic markets. There are still barriers to market entry as a result of the industry structure, and technical restrictions. Furthermore, although the legal framework has been set up, the Railimplement and Servrail projects showed that some Member States had not implemented the rail liberalisation Directives. Much of this has now taken place, but there are still many countries that have still failed to complete the implementation of the First Railway Package (for example Italy in relation to charging framework for rail related services such as access to maintenance and deposit infrastructure).
- 4.18 The progress of liberalisation in the rail sector has also been assessed on a regular basis by the Rail Liberalisation Index (produced by IBM for Die Bahn)⁵. This index compiles a ranking of the level of liberalisation taking into account both legal implementation and an assessment of the relevant access restrictions in the national market. Although the study does have its limitations, it gives an indication of the level of liberalisation in Member States. Based on this study there are some Member States that are classified as advanced (Great Britain, Germany, Sweden and the Netherlands); some that are delayed (Luxembourg, France, Greece and Ireland) and the rest that are on schedule.
- 4.19 The study shows that in those Member States that were advanced or On Schedule with implementation when the latest Rail Liberalisation Index was prepared, have seen an upturn in freight growth which is often attributed to the relative openness of their markets. The same is not as clear in the passenger rail market, but it is also true that there has been limited liberalisation in this market to date, although the Advanced countries in this case still did well compared to other two categories⁶.
- 4.20 There are also signs that market opening in the rail sector is starting to bring some success. Customers now have more choice in the freight sector and for example in the UK often switch between operators if they are not happy with one supplier. Furthermore competitiveness has increased as the market share of new entrants has slowly increased, such as on the Brenner corridor. This has added a significant stimulus towards efficiency and has encouraged the incumbent operators to rethink their approach to the market and improve their competitive position. Two examples

⁵ Rail Liberalisation Index 2007 Market Opening: Rail markets of the Member States of the EU, Switzerland and Norway in Comparison. 2007. IBM Global Business Services.

⁶ See Task 1.1 report for further information.

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of these are the withdrawal of Trenitalia from a number of freight markets nationally, together with the restructuring of SNCF's freight business.

- 4.21 This had led to international consolidation in the industry: the main example of this is DB and their acquisition of the Danish and Dutch national freight operators and more recently through their acquisition of EWS in Great Britain. Furthermore, new entrants are not only undercutting incumbent providers, but are also diversifying into other areas that had long been abandoned by operators such as food transportation.
- 4.22 However, as discussed in more detail in section 6 below, despite these promising signs, the liberalisation of the rail sector has not as yet resulted in the achievement of the CTP objective of modal shift.

Road transport

Measures taken

- 4.23 Both international road freight and passenger services were liberalised in the 1990s, following the 1992 White Paper. However, although some liberalisation of cabotage services has been introduced, this is limited to services operated on a temporary basis, and therefore most domestic services are still protected.
- 4.24 Road haulage cabotage legislation is currently being revised, with the aim of merging the two Regulations on access to the road transport market and the Council Directive exempting certain transport. The new legislation (which has been approved but has not as yet entered into force) seeks to introduce the following changes:
- An updated definition of “cabotage”. Cabotage is only to be legal if hauliers conduct no more than three cabotage operations in the country of destination within seven days of completing an international delivery. During the legislative discussions, the European Parliament called for the lifting of all limits on cabotage by 2014.
 - A simplified and standardised format for the Community licence and other documents to reduce delays especially at road side checks.
 - Improving current legal provisions requiring a Member State to act when a haulier which it has licensed commits an infringement in another Member State.

Impact of the measures

- 4.25 Liberalisation has been successful in achieving the goal of creating a competitive internal market for road transport in the EU15, subject to the conditions set out by the Directives relating to cabotage within Member States. For a transitional period, these provisions did not apply to operators from 7 of the 10 Member States that joined in 2004. Since 1 May 2009 these limitations have been lifted for these seven States but they continue to apply to Romanian and Bulgarian hauliers.

*Waterborne transport**Measures taken*

- 4.26 Liberalisation of sea transport services occurred in parallel with air services. The first Regulations on international transport services were issued in 1986, while cabotage services were liberalised in 1992. However, Member States can impose PSOs for routes connecting the mainland to islands; although they must be awarded through a public tender ensuring equal and non discriminatory treatment regardless of the operators' nationality. By the 2001 White Paper, the market for sea transport services was fully open, although some difficulties remained which prevented effective competition for PSO services (in particular, long term concession agreements signed before Regulation 3577/92 took effect).
- 4.27 Inland waterways represent an exception to the rule mentioned above, as market opening of cabotage services, set out by Regulation 3921/91 was limited to services operated on a temporary basis, and actually occurred before the liberalisation of international services, set out by Regulation 1356/96.
- 4.28 Following the Green Paper on seaports and maritime infrastructure issued in 1997, the 2001 White Paper included a proposal aimed at allowing service providers to go to the open market for port services (piloting, cargo handling, etc.).
- 4.29 In 2001 and 2004, the Commission submitted two proposals on market access to port services. The first was rejected by the European Parliament, whilst the second was withdrawn by the Commission, in both cases because of social concerns and resistance by Member States.
- 4.30 The Commission has tried to reduce the remaining technical barriers that are hindering the growth of the maritime sector to further aid market integration. It has sought to promote short sea shipping; simplify the regulatory framework in maritime and inland waterway markets (following the better regulation objective in the Mid-Term review document); harmonise boatmasters' certificates; and, transfer the ships register (from national registers to a Europe wide register). It has also recently proposed an action plan with a view to establishing a European maritime transport space without barriers⁷.

Impact of the measures

- 4.31 Liberalisation was already well entrenched in the majority of areas. However, in the maritime sector, the objective of further steps in the liberalisation process aimed at creating a common legal framework for the provision of port services has not been achieved, due to lack of support. A number of measures introduced by Member States, in line with the Community Guidelines for State aids for maritime transport, have contributed to keeping part of the fleet on European registers and generating jobs for European seafarers⁸.
- 4.32 In relation to inland waterways the measures taken have improved the regulatory framework to create an integrated EU internal market, but the impact of this has, to date, been limited in terms of increased market share for this transport mode.

⁷ COM(2009) 10 final.

⁸ COM(2009) 8.

This may be partly due to administrative and regulatory barriers which limit the scope for new entry to the market.

Public transport

Measures taken

- 4.33 Fewer measures have been taken in public transport, due to the different nature of operations in Member States and the principle of subsidiarity. The White Paper and the Mid-Term Review stated that, for this reason, EU intervention would be limited, primarily to the dissemination of best practice and the promotion of alternative fuels. Other reasons include many operators being owned by public authorities and concerns about the impact of market opening on employment. These issues prevented, until 2007, the adoption of liberalisation measures by the EU, even though some Member States already allowed cabotage.
- 4.34 Regulation 1370/2007, which followed the Altmark decision by the European Court of Justice⁹, defines that public authorities should be free to choose whether to adopt competitive tenders to award services or not, provided that direct awards do not negatively affect competition in the internal market and that the following criteria are met:
- There must be a formal document setting out the public service obligations (PSOs), best organised through Public Service Contracts (PSCs);
 - The subsidy is defined following clear and transparent parameters;
 - The subsidy should only cover the cost of production and a reasonable level of profit;
 - The subsidy can only be applied once there has been a calculation of the costs of an efficient operator.

Impact of the measures

- 4.35 Although the Regulation does not require competitive tenders, it does represent a step towards aligning the legislation of Member States in this area and should gradually make the market more competitive.

Impact of other policy measures

- 4.36 In addition to the sector-specific actions described above, other measures which have been pursued which have also contributed to making the transport market more competitive:
- **State aids:** The Commission has taken measures to combat state aids, which is forbidden if it distorts competition and negatively affects trade between Member States. Most such aid now has to be notified to, and approved by, the

⁹ The Altmark decision involved the application of the “services in the general economic interest” (SGEI) principles within the transport context. SGEI are those services where the principle of state intervention is accepted by European authorities. See Case C-280/00 Altmark Trans GmbH judgment of 24 July 2003. This case was in response to an Article 234 reference from the German Bundersverwaltungsgericht.

Commission. The Commission also issued guidelines dealing with state aid in the air sector (1994), the maritime sector (2004), airports (2005) and railways (2008).

- **Enlargement:** EU enlargement in 2004 and 2007 has facilitated new entry by companies based in the enlargement States and therefore contributed to greater competition. It has also led to substantial improvements in competitiveness and services offered in the 10 Member States that joined the EU in 2004, as these markets have had to change radically to meet the requirements of accession.

Facilitation of investment in priority infrastructure

Objectives

- 4.37 The 2001 White Paper established a key strategic objective of eliminating bottlenecks on the European transport network. This was a priority area for EU-level action because many of the bottlenecks are at the crossings between Member States, reflecting the fact that the transport networks within Member States were generally designed on a national basis. The White Paper stated that unless infrastructure was interconnected and free of bottlenecks, the internal market and the territorial cohesion of the Union could not be fully realised.
- 4.38 The policy of the development of a Trans European Network (TEN-T) dated to the Maastricht treaty, but the 2001 White Paper acknowledged that progress in the development of TEN-T had been slow. Only 20% of the infrastructure planned in 1996 (3 projects out of 14) was complete by 2001. The White Paper envisaged a revision of the TEN-T Guidelines, based on the review of the list of priority projects and a greater involvement of the private sector in the financing of transport infrastructure, to be achieved by encouraging the development of public private partnership (PPP), as well as new procedures for the award of public contracts.

Measures taken

- 4.39 The TEN-T Guidelines have been revised (Decision 884/2004) to take into account the outcome of the enlargement process. This includes an updated list of 30 projects declared of European common interest (priority projects)¹⁰. These were mostly rail projects but also included the motorways of the sea¹¹, project Galileo and some road projects. These projects should be complete by 2020.
- 4.40 Regulation 680/2007 increased the maximum amount of Community financial aid granted to priority projects from 10% to 20% of eligible costs, and up to 30% for cross-border sections of priority projects. For other projects, the threshold remains at 10%.

¹⁰ They include the original 14 projects selected in 1996.

¹¹ Corridors dedicated to short sea shipping services.

4.41 In order to improve the co-ordination of Community funds in TEN-T, a Trans-European Transport Network Executive Agency (TEN-T EA¹²) has been established. This will assume responsibility for implementation of the 2007-2013 TEN-T projects. The mission of the TEN-T EA is to provide an efficient and effective service in realising the technical and financial implementation of the TEN-T programme.

Impact of the measures

4.42 The development of the TEN-T network has contributed to the achievement of the overall objective of the CTP by improving national rail and road network interconnections; facilitating interoperability; and stimulating the development of intelligent transport systems such as Galileo. However, the extent of this is limited, because although €400 billion has been directed towards the TEN-T projects since their initial identification in Decision 1662/96, only 4 have been completed, and there is still a long way to go for all the initial plans to be fully implemented.

4.43 As a result, the problem of bottlenecks still persists. In addition, as the large majority of TEN-T funded projects are in the rail sector, it can do little to address the issue of bottlenecks on the road transport network (although regional aid and cohesion funds will contribute to this).

4.44 A number of issues still hinder the ability of the policy to deliver results efficiently and within the timescale originally scheduled, such as:

- in some cases, public and political opposition to construction of new transport infrastructure¹³, often on environmental grounds;
- limited transparency in the selection of projects;
- a lack of financial resources both at Community and Member State level;
- poor management, monitoring and coordination of interventions; and
- the technical complexity of some projects (often due to the border crossing).

4.45 Through the TEN-T budget, ERDF and Cohesion Fund, the EU is currently supporting the start-up of short sea shipping services along four corridors (“motorways of the sea”), by promoting best practice in ports, and financing intermodal connections between ports and the rest of TEN-T. However, the success of this will depend on coordination between transport modes.

4.46 The future of inland waterway transport in Europe largely relies on the completion of the two priority projects to remove bottlenecks (the Rhine-Meuse-Main-Danube axis and the construction of the Seine-Scheldt canal). Both projects are technically and environmentally complex, and from the information provided in the latest report available on TEN-T priority projects implementation¹⁴, it appears that they are unlikely to be completed by 2016 (though this is the date planned by Member

¹² Commission Decision 2007/60/EC establishing the Trans-European Transport Network Executive Agency.

¹³ For instance in Italy there has been fierce opposition to the construction of the Lyon-Turin Base Tunnel from the public and local authorities. In Germany, environmental concerns about the construction of a lock in Aicha are delaying progress on the Rhine/Meuse-Main-Danube waterway axis.

¹⁴ DG TREN (2008), TEN-T. Implementation of the Priority Projects Progress Report. May 2008.

States for end of work). However, works on some sections are ongoing and the EU has already supported the upgrading of key stretches along the Danube in countries such as Hungary and Romania through ISPA funds.

Development of innovative technologies

Objectives

- 4.47 The 2001 White Paper suggested that the development and adoption of Intelligent Transport Solutions at the EU level could help improve the use of transport infrastructure by reducing congestion and energy consumption, supporting greener mobility, and increasing traffic safety. A number of specific policy measures were proposed in order to promote the development of innovative technologies and intelligent transport systems.

Measures taken

- 4.48 Examples of measures taken to introduce intelligent transport systems and innovative technologies include:

- **European Rail Traffic Management Systems (ERTMS)**, which aims to standardise the different rail signalling and speed control systems existing in different countries in Europe with the final goal of reducing barriers to entry into the market and of movement between Member States. The EU is providing financial support to the installation of these systems and intends to earmark a major part of the Trans-European network funds specifically for this purpose.
- The **Single European Sky ATM Research (SESAR)** programme, which aims to create a new generation of Air Traffic Management systems by standardising and modernising those currently used with scope to share information between different operators; increase punctuality and reduce flight times; achieve improved efficiency for the air sector; and, improve safety standards and lessen the environmental impact of air traffic.
- **Vessel Traffic Monitoring and Information systems for sea transport.** SeaSafeNet (Safe Sea Network) is one example of such a system. In particular, it allows data exchange between data providers and data requesters through the use of XML Messaging System (which is the core of SeaSafeNet).
- **River Information Services (RIS) for inland waterways**, which is one of the interventions set in the NAIADES European action programme (2007-2013) and the PLATINA project which is implementing the NAIADES actions. The overriding goal is to promote the use of inland waterways in freight transport.
- The **EU Intelligent Car Initiative**, started in 2006 with the aim of introducing smarter, safer and cleaner road transport in Europe and consequently to reduce road accidents, congestion, fuel consumption and CO₂ emissions.
- The **Galileo programme**, aimed at developing a European-controlled global satellite navigation system, which could replace the current international systems and guarantee a reliable service for Europe.

- 4.49 The Commission has also recently adopted an Action Plan on Intelligent Transport System for road transport¹⁵, with the aim of accelerating and coordinating the deployment of ITS in this sector.

Impact of the measures

- 4.50 By definition, the development of these systems are complex and long term projects. It is therefore not possible, at this stage, to judge whether the measures have been successful. However, it has to be noted that several of these projects are behind schedule. For example, the 2001 White Paper envisaged that the Galileo programme would be operational by 2008, whereas it is still at a development stage.

Development of logistics and promotion of inter and co-modality

Objectives

- 4.51 As part of the objectives of improving economic efficiency and reducing congestion and pollution, the 2001 White Paper announced the launch of the Marco Polo programme, to shift freight from road to more environmentally friendly modes, particularly short-sea shipping, by promoting intermodal services. The specific objectives of the programme were:

- to support the start-up phase of new services which would lead to sustainable shift from road;
- to improve the operation of the entire inter-modal supply chain; and
- to support innovation and the dissemination of best practice.

- 4.52 The Mid Term Review stressed the key role of logistics in ensuring sustainable and competitive mobility in Europe and introduced the concept of “co-modality”, i.e. “the efficient use of different modes on their own and in combination.

Measures taken

- 4.53 Two funding programmes, Marco Polo I (2003-2006) and Marco Polo II (2007-2013), were introduced. The budget for the programmes were €150 million and €450 million respectively. Marco Polo I was primarily focussed on the road sector. The scope for Marco Polo II was wider, both in geographical terms (to include Iceland, Norway and Croatia), and to include other modes and projects, such as motorways of the sea and traffic avoidance projects.

- 4.54 In October 2007 the Commission adopted a “Freight Logistics Action Plan”¹⁶ to improve the efficiency and sustainability of freight transport in Europe. The plan presented a number of actions, including:

- e-Freight (the ability to track and trace freight across transport modes and to automate the exchange of data for regulatory or commercial purpose) and Intelligent Transport Systems for freight transport;

¹⁵ COM(2008) 886 final

¹⁶ COM(2007) 607 final.

- adoption of indicators to evaluate supply chain performance;
- elaboration of benchmarks for terminals;
- further harmonisation of vehicle dimensions and loading standards;
- simplification of administrative procedures (single access point); and
- improving urban freight transport logistics.

Impact of the measures

- 4.55 Marco Polo has had limited impact to date, partly because the funds have not been fully utilised. To date, 104 contracts have been concluded, but the budget committed was well below the budget available¹⁷. During the period 2003-2006, the modal shift target (12 billion tonne kilometres) was not achieved.
- 4.56 Several actions are scheduled for coming years in the field of logistic and co-modality, following the adoption of the Freight Logistics action plan. The impact assessment of the plan identifies a number of possible positive outcomes¹⁸, but at present it is too early to assess whether this initiative has been successful..

Reform of pricing and taxation

Objectives

- 4.57 Transport imposes costs on wider society which, in most cases, are not taken into account in the prices that transport users or operators pay. This may lead to an inefficient level of transport output, and the 2001 White Paper identified that, as a result, transport congestion had become a key constraint on the European economy. As discussed in section 6 below, transport also has significant environmental externalities.
- 4.58 In order to address this, the 2001 White Paper recommended marginal social cost pricing for transport infrastructure use, aimed at improving the overall efficiency network usage and reducing congestion. This built on previous policy documents, in particular the 1998 White Paper 'Fair Payment for Infrastructure Use: A Phased Approach to a Common Transport Infrastructure Charging Framework in the EU'.

Measures taken

- 4.59 Although the objectives of the White Paper in this area were very ambitious, the specific measures proposed were quite limited, and many of these related to encouragement of best practice. Actions which have been taken at EU-level included:
- introduction of a Directive to guarantee the interoperability of tolling systems;
 - a partial harmonisation of the level of fuel taxation (through the Energy Products Directive 2003/96);

¹⁷ De la Lastra, 2008.

¹⁸ SEC(2007) 1321.

- exemption of hydrogen and biofuels from energy taxation has been permitted (also through the Energy Products Directive);
- launch of a consultation process on smart charging for infrastructure use;
- proposal of a common methodology for the assessment of external costs, to be used in the calculation of charges (as part of the Greening Transport Package¹⁹); and
- revision of the Eurovignette Directive to allow variation of charges based on local air and noise pollution and congestion (this was also part of the Greening Transport Package).

4.60 In addition, legislation has been introduced to make the charges for use of airports, air traffic control services, and rail infrastructure more cost-reflective and/or more transparent. However, these did not require marginal social cost pricing, although Directive 2001/14/EC allows rail infrastructure charges to reflect the scarcity of capacity and environmental costs.

4.61 A number of measures have also been taken by Member States which are consistent with the policy. For example:

- In 2005 Germany introduced a distance-based tolling system, for heavy trucks (over 12 tonnes) only;
- Stockholm and London have introduced congestion charges (within the London charging zone, peak traffic congestion, measured in terms of additional journey time relative to the time taken for a journey in uncongested conditions, was reduced by 21%);
- Milan experimented with a pollution charge (Ecopass) in 2008; and
- a number of States including the UK and France have introduced or increased taxes on air passengers, although the link between these charges and the external costs of air transport are weak, because the charges are applied at a flat per-passenger rate.

Impact of the measures

4.62 Most of the measures that were identified in the White Paper relating to pricing and taxation have been implemented, but the policy has had little direct impact as yet. This reflects the fact that most decisions about pricing and taxation are still made at national level. Therefore, the main action that the Commission can take is to facilitate change and encourage best practice; this is what the White Paper stated would be done (at least for private vehicles).

4.63 Some steps have been taken at a national level to implement policy measures which are consistent with the principles set out in the White Paper, such as the distance-based tolls introduced in Germany. Where these measures have been introduced, they have been successful, but there are relatively few examples of this. Public opposition has been a key problem. A referendum in Stockholm resulted in a narrow majority in favour of a congestion charge, but a referendum in Manchester in the UK resulted in a strong rejection of this, while Milan decided not to hold a public

¹⁹ COM(2008)433

consultation on the Ecopass scheme originally planned at the end of the 1 year experimental period.

Conclusions and lessons learnt

- 4.64 The analysis undertaken shows that substantial progress has been made towards meeting the objective of the CTP of creation of a competitive internal market for transport services, by liberalising the transport market. Market opening has been very successful in the air sector, and there are signs that market opening in the rail sector is starting to bring some success, but it is too early to assess the full results of this, particularly because some Member States have been slow in implementing the relevant Directives. In other sectors, further reforms are required in order to fully implement liberalisation.
- 4.65 The case study analysis of Member States undertaken for Task 2 shows that liberalisation of the air market has brought significant consumer benefits, in terms of lower air fares, new air services, and where surface competitors (for example the railways) have offered lower fares to compete with the airlines, as in Germany. The case studies also show some examples of where new competitive rail freight services have started as a result of liberalisation. However, the case studies also demonstrate that in some sectors, particularly rail, realisation of benefits from liberalisation is dependent on full implementation of the relevant legislation by Member States, and that this has not always occurred.
- 4.66 The major lesson learnt from the opening of the market is that introduction of legislation is not in itself sufficient to ensure that markets are opened in practice. In the railways the initial attempts at liberalisation had little impact on the market; only in recent years has there actually been any increase in competition, and this is still limited to niche areas. As a result, at EU level, the objective of the White Paper of shifting the balance between modes of transport towards rail has not been achieved, although there are some exceptions to this, for example where there has been investment in new high speed infrastructure.
- 4.67 Similarly, although there has been progress towards the CTP objectives of eliminating infrastructure bottlenecks, this progress has been relatively slow, partly due to the scale, complexity and cost of the projects.
- 4.68 In addition, whilst there has been progress towards the objective of introducing a system of transport infrastructure pricing and taxation which better reflects marginal costs, and most of the specific measures proposed in the White Paper have been implemented, overall progress has been limited, largely because most decisions about pricing and taxation are still taken by Member States, and in some cases due to strong public opposition.

Recommendations

- 4.69 We recommend that the process of market liberalisation of the transport sector should be continued, in order to meet the CTP objective of a competitive internal transport market. In particular, this should include:

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- Continued effort to liberalise the rail sector, in particular to ensure that all Member States fully implement and enforce the packages of Directives that have already been passed.
 - Full liberalisation of road freight transport, including removal of all restrictions on cabotage as requested by the Parliament. There is no more economic rationale or justification for market restrictions in this sector than there is in the air sector, although (as in the air sector) liberalisation may need to be accompanied by appropriate regulatory measures to ensure maintenance of safety standards and (possibly) working conditions.
 - Removal of remaining restrictions on international road passenger transport, including permitting cabotage.
- 4.70 In order to ensure that the limited TEN-T funds are used most efficiently to address infrastructure bottlenecks, decision-making about the allocation of funding should be based on cost benefit analysis of different schemes, using consistent criteria and parameters, but should not favour specific modes of transport. The different environmental and other social costs of different modes should be taken into account in this cost benefit analysis.
- 4.71 With regard to pricing and taxation, the limited congestion pricing schemes that have been introduced in some Member States have been successful. However, gaining public acceptance of these schemes **prior** to implementation has proved difficult. The scope of these schemes means that their introduction is within the competence of national and regional governments, in accordance with the principle of subsidiarity, but the EU can continue to promote best practice and may be able to assist with the development of technological solutions for road pricing.

5 Social aspects of the CTP

Introduction

- 5.1 Transport has an important social dimension. The European transport sector employs 8.9 million people, and therefore the social conditions of transport workers are important. Millions of journeys are made every day, and therefore transport service quality is a key issue for many citizens. In addition, transport has a number of social externalities. Some of these are positive (such as increased social cohesion) but there are also negative social externalities, such as accidents and (potentially) security threats.
- 5.2 This section discusses the objectives related to the social dimension of the CTP, within the following areas:
- Safety;
 - Security;
 - Level of service quality and passenger rights; and
 - Working conditions.

Safety

Objectives

- 5.3 The main problem related to safety identified in the 2001 White Paper was road safety, and reducing road fatalities was one of the key objectives of the White Paper. All Member States faced similar road safety problems (albeit to varying degrees), such as excessive speed, drinking and driving, failure to wear a seat belt, insufficient protection provided by vehicles, existence of accident black spots, non-compliance with driving and rest times by commercial drivers and poor visibility. At that time, the forthcoming enlargement to include countries with a poor level of road safety was listed as an additional challenge.
- 5.4 The 3rd European Road Safety Action Programme (2003-2010), adopted by the Commission in June 2003, and endorsed by the Transport Council on 5 June 2003, set the objective of halving the number of people killed on the roads by 2010 (with respect to 2000 levels) as ultimate goal. It also proposed a series of measures such as increasing checks on road traffic, deploying new road safety technologies, improving road infrastructure and measures to improve users' behaviour.
- 5.5 A specific problem identified in the White Paper was tunnel safety. Many corridors on the Trans-European Road Network (TEN-T) include long tunnels, often built decades ago, which do not meet modern safety standards. The White Paper was produced shortly after the fires in the Mont Blanc, Tauern and Gotthard road tunnels. Therefore, addressing safety in tunnels was a key objective identified.
- 5.6 The accident rate in the rail transport sector was significantly lower than in the road sector, and therefore the objective was to maintain or improve this, despite

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changes in the market. The White Paper stated that market opening and interoperability “must guarantee a level of safety at least equal to, if not higher than, that achieved today in the national context”. Similarly, in the air transport sector, the level of safety is very high, but a number of specific measures were proposed in order to maintain the low rate of accidents despite traffic growth. In particular, the White Paper noted that third-country aircraft had not always complied with international safety standards and therefore it was necessary to take actions to address this. In the maritime sector, the main issue highlighted in the 2001 White Paper was that the regulatory authority, the International Maritime Organisation (IMO), lacked effective powers of inspection and enforcement.

Measures taken

- 5.7 Many actions have been taken at EU level to achieve objectives relating to safety. In the road transport sector, measures taken include:
- Directive 2003/20, which requires seatbelts to be used where they are available.
 - A Directive (2008/96/EC) has been introduced on road infrastructure safety management, which requires infrastructure builders and managers to take road safety into account in all stages of road planning and operation on the trans-European network.
 - The CARE accident database has been developed, to provide a harmonised EU-wide data source which can be used as a basis for policymaking.
 - Progress has been made to promote the introduction of ITS solutions that could improve the safety of road transport (eg. the e-Safety initiative, which is part of wider “Intelligent Car Initiative”).
- 5.8 Measures introduced to improve the working conditions of professional drivers, such as harmonization of road safety checks, have also contributed to improving road safety. These measures are discussed in more detail below.
- 5.9 In the rail sector, key issues to address were:
- Modernisation and harmonisation of the safety regulatory structure and safety rules in the Member States and at European level;
 - Introduction of common safety requirements and elements for a safety management system;
 - Introduction of a transparent monitoring of railway safety in the Member States;
 - Enforcement of rules for accident and incident investigations.
- 5.10 These issues were addressed within the Second Railway Package, and particularly by Directive 2004/49/EC and Regulation (EC) 881/2004, setting up the European Railway Agency (ERA). National safety rules and technical standards were to be replaced by common standards, provided by Technical Specifications for Interoperability (TSIs) prepared by ERA and enforced by the Commission²⁰. This was aimed at ensuring the improvement of safety levels in the new EU-wide rail market,

²⁰ The most notable standard introduced is ERTMS. One component of the ERTMS, the European Train Control System (ETCS), enables trains to cross national borders and enhances safety.

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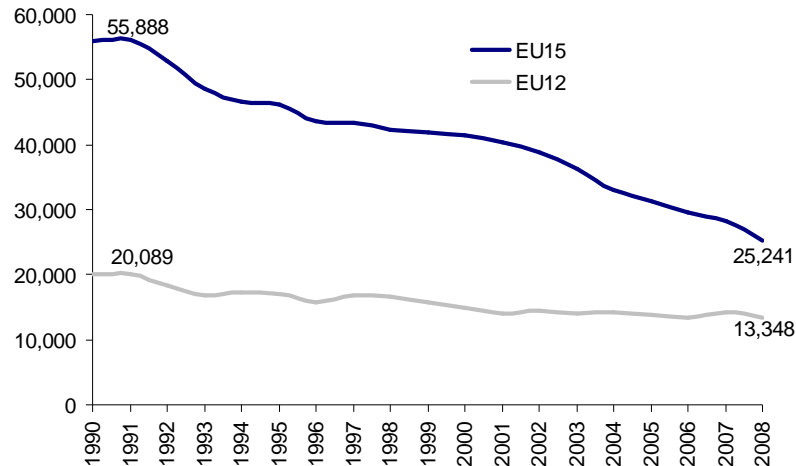
and at the same time, setting transparent and non discriminatory rules. The second area above was mainly addressed through the harmonisation of safety certificates, which ensured that the rail operator had in place a reliable safety management system. Directive 2004/49/EC also required each Member State to establish an independent rail safety authority. Finally, accident and incident investigations must be carried out by an autonomous body, independent from the various actors of the sector.

- 5.11 The 2001 White Paper also proposed minimum safety requirements for tunnels exceeding 500 metres of length, whether in operation, under construction or at the design stage, and forming part of the TEN-T. This proposal was enacted for road tunnels within Directive 2001/54/EC, which lays down a set of harmonised minimum safety standards dealing with the various organisational, structural, technical and operational aspects. In the rail sector, the Commission issued a TSI specifically dealing with safety issues in rail tunnels, applying to tunnels on the Trans-European Network (Commission Decision 2008/163/EC).
- 5.12 In the air transport sector, the White Paper proposed the creation of a European Air Safety Agency (EASA). EASA was initially responsible for the harmonisation and enforcement of technical rules of civil aviation²¹ and now also covers air operations, pilots' licences and, within the limits set by the Chicago Convention, the safety of third-country aircraft. It also includes standardisation inspections and safety oversight, with particular responsibility for ramp inspections.
- 5.13 In addition, the procedures for ramp inspections of third-country aircraft landing at airports located in the Member States have been harmonised and enforced (Directive 2004/36/EC, now repealed and replaced by Regulation (EC) 215/2008). In its original version, the Directive granted the possibility of grounding aircraft failing to comply with safety standards. This provision was repealed by Regulation (EC) 2111/2005 and Commission Regulation (EC) 474/2006 which established a list of air carriers banned from operating flights within and into the Community.
- 5.14 In the maritime sector, in order to make the adoption of IMO standards more efficient, the Committee on Safe Seas (COSS) was set up with Regulation (EC) 2099/2002. It was involved in the implementation of a large number of safety standards set by IMO, such as for:
- the implementation of the International Safety Management Code (Regulation 336/2006);
 - the safe loading and unloading of bulk carriers (Directive 2001/96/EC);
 - marine equipment (Directive 96/98/EEC);
 - safety rules and standards for passenger ships (Council Directive 98/18/EC, as amended by Directive 2004/25/EC).
- 5.15 Finally, Regulation (EC) 1406/2002 established a European Maritime Safety Agency (EMSA), appointed to provide technical and scientific assistance to ensure the implementation and enforcement of Community legislation in the field of maritime safety, and evaluate its effectiveness.

²¹ See for example Commission Regulation (EC) 1702/2003 and 2402/2003 on airworthiness and environmental certification of aircraft and related products, parts and appliances.

Impact of the measures

- 5.16 The current data on road fatalities indicates that the objective of reducing road deaths by 50% by 2010, as defined in the 2001 White Paper, is unlikely to be achieved; nonetheless, there has been significant progress. In 2008 about 38,500 people were killed in road traffic accidents in the EU, 15,700 less than in 2001, a 29% reduction (Figure 5.1 below), although different patterns were registered in different Member States²².

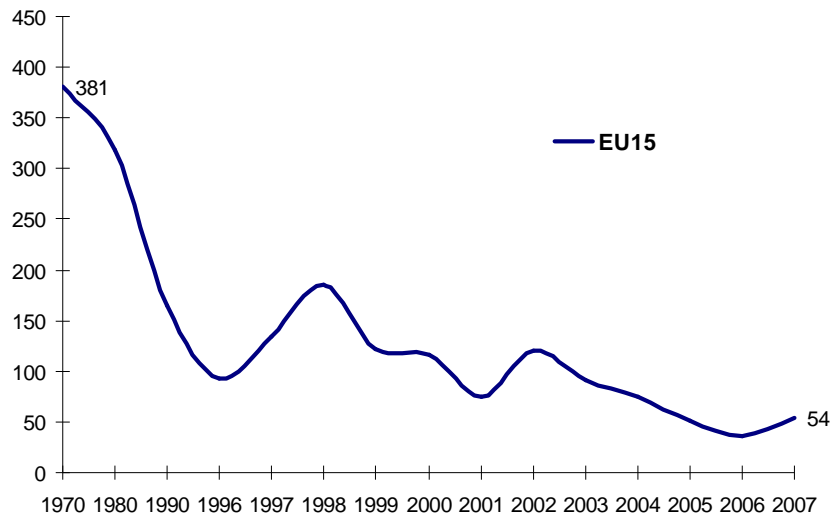
FIGURE 5.1 ROAD FATALITIES IN EU15 AND EU12 (1990-2007)

Source: Steer Davies Gleave elaboration on Energy and Transport Statistical Pocketbook 2009, DG TREN and CARE report March 2009.

- 5.17 Although many actions have been taken at EU level towards this objective, the extent to which EU actions can achieve the targets it sets for road safety depends on the efforts made by Member States to enforce legislation, and on trends in traffic volumes. In particular, there are significant differences between Member States in laws on drink driving, and in the effectiveness of the enforcement of road traffic laws. The initial safety situation also impacts on the potential impact of better enforcement.
- 5.18 Accident figures show that in some countries, such as Luxembourg, France and Portugal, some positive results have been reached, thanks to the pro-active role of governments, but in many new Member States (Romania, Slovenia, Lithuania, Slovakia and Poland) the number of fatalities increased between 2001 and 2007, mainly due to an increase in traffic and inadequate infrastructure. According the European Transport Safety Council (ETSC), on the basis of current trends, the EU will reach its target only in 2017. The EU15 is projected to reach the target in 2013, but slower progress is projected in Central and Eastern European countries.
- 5.19 In the rail sector, accident statistics show a long term downward trend for the EU15 countries (Figure 5.2 below). This can be attributed to a lot of factors, among which the special attention received by both European institutions and Member States in view of the coming opening of the market, the increasing role of the European Rail Agency and the gradual introduction of innovations which enhanced rail safety levels (for example changes to vehicle design).

²² Note: 2008 values are taken from CARE report March 2009 and are provisional

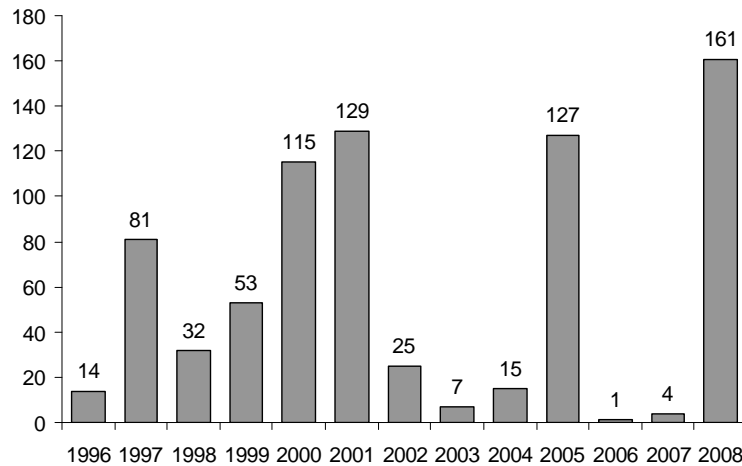
FIGURE 5.2 RAILWAY PASSENGER FATALITIES IN EU-15 BETWEEN 1970 AND 2007



Source: Steer Davies Gleave elaboration on Energy and Transport Statistical Pocketbook 2009, DG TREN. Note: data are provided by the International Union of Railways (UIC) and do not include railway employees or non-users

5.20 Figure 5.3 shows the trend in the number of lives lost on flights operated by EU carriers. As a result of the low number of accidents each year, and the large number of lives that can be lost in an individual accident, this does not show any consistent trend. For example the loss of the Helios Air 737 in 2005 accounted for all but 6 of the fatalities of EU carriers in 2005. Given the significant growth in air travel, however, the long term accident rate appears to be declining.

FIGURE 5.3 AIR FATALITIES: LIVES LOST BY EU27 OPERATORS



Source: Steer Davies Gleave elaboration on Energy and Transport Statistical Pocketbook 2009, DG TREN

5.21 Analysis of a trend in aviation safety would require reliable data to be available for safety-related incidents which do not actually result in accidents (for example “near misses”), but consistent data for this is not available. A key issue is that variations in the number of incidents reported to the aviation authorities by air carriers and air traffic control can reflect variations in reporting as well as variations in the number of incidents which actually occur. For both legal and cultural reasons, reporting of incidents which do not result in accidents is not always complete.

- 5.22 Limited analysis available for the air traffic management sector indicates that, in those Member States for which data is available, the number of incidents is remaining approximately unchanged despite increasing traffic levels; however it should be emphasised that this only covers safety issues caused by air traffic control²³.

Security

Objectives

- 5.23 Although the 2001 White Paper dealt with security of transport activities in the section related to the theme of managing the globalisation of transport, it was drafted before the 9/11 terrorist attack²⁴, and this issue took on greater significance after this event. Since 2001, maintaining the security of the transport sector has been a key objective for the CTP as well as national governments.

Measures taken

- 5.24 In the air sector, Regulation 2320/2002 made the security measures laid down by the European Civil Aviation Conference (ECAC) compulsory within the EU. The Regulation also requires Member States to adopt a national civil aviation security programme in order to ensure that common standards are applied, which relate to airports, aircraft, passenger and cabin baggage, hold baggage and cargo.
- 5.25 In the rail sector, Regulation 1371/2007 on rail passengers' right and obligations addressed the issue of security in railway stations and on trains and mandate railway companies to take adequate measures to limit risks.
- 5.26 The main legislation dealing with security issues in the maritime sector is:
- Regulation (EC) 725/2004, aimed at providing the basis for the interpretation, implementation and monitoring of the special measures adopted by IMO in 2002, amending the SOLAS Convention²⁵ and establishing the International Ship and Port Facility Security Code (ISPS Code).
 - Directive 2005/65/EC, aimed at introducing a security system in port areas, based on the setting up of security authorities for each port. The authority takes the necessary measures in line with port security assessments and plans, which have to be updated on a regular basis.
- 5.27 The Commission also launched a proposal (COM(2006) 79) aimed at improving protection against terrorist attacks within the inland freight transport sector without creating too stringent barriers on free trade and avoiding unnecessary administrative procedures. The proposal is based on:
- a mandatory system requiring Member States to create a security quality label ("secure operator") to be awarded to operators meeting European minimum security levels;

²³ Eurocontrol Performance Review Commission, Performance Review 2006.

²⁴ The 2001 White Paper was adopted on the 12th of September 2001.

²⁵ International Convention for the Safety of Life at Sea.

- a voluntary scheme under which operators in the supply chain increase their security performance in exchange for incentives;
 - making operators in the supply chain responsible for their security performance;
 - allowing "secure operators" to benefit from favourable security inspection conditions, giving them a commercial and competitive advantage;
 - allowing regular updating and upgrading of security requirements, through the committee procedure, whereby the Commission is assisted by a committee formed of representatives from the Member States.
- 5.28 However, the process towards the adoption of the proposal has stalled, partly because several stakeholders and operators claimed that it would put excessive costs on hauliers and suggested other ways of dealing with this issue.

Impact of the measures

- 5.29 It is very difficult to measure whether the CTP measures relating to transport security have been successful in achieving the objective of maintaining a secure transport system, as the main indicator of success is the absence of incidents, and this reflects a number of wider factors. Although there have been no major attacks on the European air transport sector since 2001, there have been a number of attacks on local transport (principally, in Madrid on 11 March 2004 and in London on 7 July 2005), and national security services have disrupted several attempted attacks on the air and rail transport sectors.

Service quality and passenger rights

Objectives

- 5.30 Before the 2001 White Paper, there was little Community legislation relating to passenger rights, and the legislation that there was almost entirely related to the air transport sector. The absence of defined passenger rights had caused some problems. For example, there were examples of airlines cancelling flights and leaving passengers stranded without any assistance at airports some distance from a city and with no alternative transport options. Similarly, some airlines and airports did not provide full assistance for passengers with reduced mobility (PRMs), or sought to charge them for this as an additional service.
- 5.31 The White Paper stated that the Commission would aim to develop and define the rights of users, to mitigate any negative impact on service quality from increased price competition between operators. It set out a number of goals in this area relating to the air transport sector, and stated that the next step would be to introduce equivalent consumer protection measures in other sectors. In addition, in 2005, the Commission provided a Communication to the Council and Parliament entitled 'Strengthening passenger rights within the European Union', which raised further issues including passenger protection in the event of bankruptcy of an air carrier, and protection for passengers with reduced mobility (PRMs).
- 5.32 The White Paper also identified that passengers have obligations, for example not to smoke on board an aircraft, although it did not identify specific objectives or actions in this area.

Measures taken

- 5.33 Since the White Paper, a number of measures have been taken. Most of these are in the air transport sector:
- Regulation 261/2004 introduced significant improvements to protection for air passengers subject to denied boarding, delays or cancellations.
 - Regulation 1107/2006 requires that passengers with reduced mobility must be accommodated and cannot be charged extra for the services they need at airports or on board.
- 5.34 The Commission has also taken measures to improve the transparency of air ticket prices, requiring that unavoidable taxes and charges be included in advertised fares. However, some carriers have circumvented this by introducing other fees, such as those for payment by credit or debit card.
- 5.35 Legislation to protect passengers' rights has also been passed in the rail sector (Regulation 1371/2007), although it has not taken effect yet. No measures have been taken as yet in the bus or maritime sectors, but the Commission has recently proposed Regulations to extend passenger rights in these sectors.
- 5.36 Measures were also taken to improve information on the performance of different airlines (e.g. punctuality, number of bags lost), so that consumers could make an informed choice, but these were not successful. This was undertaken temporarily by the Commission but abandoned due to non co-operation by air carriers. Some information is however published on a voluntary basis by the Association of European Airlines.
- 5.37 Some measures have been taken to clarify obligations of passengers: for example, Regulation 1371/2007 specifies reasonable measures that passengers with reduced mobility must take in order to inform operators in advance.

Impact of the measures

- 5.38 Most of the goals of the policy that have been set out for the air sector have either been achieved, or significant progress has been made towards achieving them. However, there have been a number of difficulties. In particular:
- Regulation 261/2004 significantly enhances passenger rights, but the impact has been limited due to mixed compliance by airlines and poor enforcement by a number of Member States. A particular problem has been that key elements of the Regulation (agreed following a conciliation process) were unclear, while they have now been clarified.
 - Other than some limited information published on a voluntary basis by the Association of European Airlines for its members only, no progress has been made towards achieving the goal of improving information, so that passengers can make an informed choice between carriers. Consumer associations could also help publish information but at present they would not have access to the basic statistical data needed, because airlines do not release it.

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- 5.39 Measures taken to date have focused mainly on the air transport sector. It could be argued that, in accordance with the subsidiarity principle, measures to protect users of domestic road, rail and maritime transport should be undertaken by Member States. However, this argument does not apply to intra-EU rail, maritime or bus passengers. There are now significant differences in the liability of rail operators, maritime operators and air carriers for events such as death or injury to passengers, loss of luggage, and delay. There is no obvious rationale or justification for these differences. The benefit to European transport passengers would be greater if measures were taken to bring passenger rights in other sectors up to the same level as those in the air transport sector.
- 5.40 Legislation has recently been passed to extend the protection of passenger rights to the rail sector, and the Commission has recently made proposals for the coach and maritime sectors. However, the measures introduced in the rail sector will only apply to international services, which represent a very small proportion of rail passenger demand; Member States may delay the application of the Regulation to domestic services for up to 15 years and do not need to apply it at all to regional, suburban or urban services. In addition, the proposed regimes applying for bus/coach and maritime passengers differ from those that apply to air and rail passengers.
- 5.41 Little action has been taken with regard to passengers' obligations. Arguably, this may be unnecessary, because operators have a strong commercial and operational incentive to take these measures themselves, and regularly do so: for example, a passenger caught smoking or behaving disruptively on board an aircraft may be prosecuted and/or banned from travelling in the future. Operators do not have an equivalent commercial incentive to promote passenger rights.

Working conditions

Objectives

- 5.42 Although working conditions were not one of the primary objectives identified in the 2001 White paper, it did point out that very few measures had been taken at EU level to provide a basic regulation of social conditions in the road transport sector, and that enforcement of the existing ones was extremely poor. It was also noted that the number of EU citizens working in maritime jobs had been in decline, because of a lack of skills, and that this should be reversed.

Measures taken

- 5.43 Although this was not one of the priority areas identified in the 2001 White Paper, a number of measures have been implemented aimed at improving working conditions.
- 5.44 Actions include Directive 2002/15/EC on the organisation of working time of persons performing mobile road transport activities and Directive 2003/59/EC on training of commercial drivers. Measures have been taken also to improve monitoring of driving time regulations (e.g. requirement of introducing the digital tachograph on road vehicles) and improve checks, and this is now a well-established activity. However, these measures relate at least as much to safety as to improved working conditions.

- 5.45 A Regulation has also been introduced (Regulation 561/2006) aimed at improving road safety and working conditions for professional drivers. The Commission has also taken measures to improve the conditions of mobile workers in inland waterway transport whilst measures to improve of the existing minimum standards working conditions for seafarers are under discussion.

Impact of the measures

- 5.46 In the road sector, there has been some progress with improving the conditions of transport workers, but there are still issues that need to be addressed. For instance, various Member States have interpreted and implemented Directive 2002/15/EC provisions in different ways, which have resulted in differences in the minimum social standards applied in different States and potentially distortions of competition.
- 5.47 Some of the actions taken have had a positive effect on improving training conditions both for professional road drivers and seafarers. However, some provisions (such as training for professional drivers) have not yet come into force or are not compulsory, which makes it difficult to provide an assessment.
- 5.48 In other areas, available data does not allow an assessment of whether actions have been successful. For example, it is not possible to assess whether the decline in the number of EU citizens working in maritime jobs has been reversed, which was the objective of legislation and other initiatives in this area.

Conclusions and lessons learnt

- 5.49 A priority objective for the CTP has been to improve road safety. Many actions have been taken at EU level towards this objective, but the overall target of reducing fatalities by 50% by 2010 is unlikely to be achieved, and there are significant variations in the progress made by different Member States. The experience of the best performing nations suggests that the key to their success has been their commitment to enforcement (drink driving, speeding and seat belts) and investments in infrastructure improvements (for example, to transfer high speed traffic from rural roads to trunk routes).
- 5.50 Another priority social objective for the CTP has been to mitigate any negative impact on service quality from increased price competition between operators. Significant progress has been made towards this objective, but there have been a number of difficulties, and several lessons can be learnt from the analysis of the actions taken so far by the EU in this field:
- It may be difficult to achieve results without legislation. For example, the Commission sought to improve the standards of information available to passengers about the performance of different air carriers, but this was dependent on the voluntary co-operation of carriers and was eventually abandoned.
 - It is essential for legislation to be clearly drafted. This has been a particular problem with Regulation 261/2004, which was agreed through a conciliation process between the Council and the Parliament.

- When legislation is introduced, it needs to be clear how the legislation will be enforced, and enforcement must be effective.
 - Although the specific characteristics of individual transport modes means that there is often likely to be a case for measures to be enacted on a mode-specific basis, there should be a clear justification for any differences in the approach between modes.
- 5.51 Maintenance of transport security has become an important objective of the CTP since the White Paper, due in particular to the terrorist attacks of September 2001. It is difficult to measure whether these measures have been successful, as the main indicator of success is the absence of incidents, and this reflects a number of wider factors.
- 5.52 The case studies of the implementation of passenger rights legislation in Member States (appendix B) demonstrates again that achievement of CTP objectives is often dependent on full implementation and enforcement within the Member States. The failure of some Member States to enforce Regulation 261/2004 effectively is one of two key reasons why the impact of this Regulation has been lower than might have been expected.
- 5.53 The enactment of the Common Transport Policy has led to the introduction of a number of measures aimed at improving the social conditions of transport workers, though its impact has been difficult to assess either because of lack of data or because it is still early to make such an assessment.

Recommendations

- 5.54 In order to achieve targets for reductions in road fatalities in the future, it will be important to encourage Member States to adopt the right strategies (which could differ between States) and commit themselves to implementing them. In addition, it will be necessary to tackle emerging trends, such as the increasing numbers of motorcyclists killed or injured on the roads: a 13% increase of this type of victim has been registered in a selection of European countries between 1997 and 2006²⁶. The protection of weaker road users, such as young people or the elderly, who are frequently pedestrians and cyclists, should also be a priority. Improvement of cycling and walking safety conditions in the EU cities would help to encourage the use of these transport modes, with benefits for the urban environment, and address the high rate of road fatalities recorded in these areas.
- 5.55 The EU could also consider a target also for non-fatal injuries. To date, the definition of such a target at the EU level is limited by the availability of data, as there are still differences between Member States' definitions of slight and serious injuries and reporting procedures. Thus, the EU should first encourage Member States to adopt a common definition of slight and serious injuries to foster comparability in official police-reported road accident statistics.
- 5.56 In order to meet the CTP objective of ensuring that liberalisation and competition does not lead to lower service quality or infringement of passenger rights, it will be necessary to take measures to ensure that Member States properly implement the

²⁶ SafetyNet, Building the European Road Safety Observatory, Annual Statistical Report 2008.

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Regulations that have been introduced, in particular Regulation 261/2004. We also recommend that there should only be variations in requirements relating to passenger rights between modes where this is objectively justifiable, for example by the different characteristics of each mode.

- 5.57 We also recommend that measures should be taken to improve the information available to users on the service quality offered by different transport operators, so that they can make an informed choice, and (if necessary) trade off different levels of service quality offered by different operators against different levels of price. At present, in many Member States, very little information is available on service quality in the air transport sector, and almost no information is available on the service quality of transport operators in other sectors such as rail. This would require legislation, as attempts to do this through the voluntary co-operation of operators in the air sector was not successful.

6 Environmental aspects of the CTP

Introduction

6.1 Reducing the negative impact of transport on the environment has been an important objective of the CTP. This section discusses the extent to which the objectives of CTP relating to the environment have been achieved. This discussion is presented in terms of the two main negative environmental externalities of transport:

- emissions; and
- noise.

6.2 Many of the measures discussed in section 4 above contribute towards meeting the environmental objectives of the CTP as well as the economic objectives. For example, the reform of transport pricing and taxation is intended to address both congestion (an economic issue) and emissions. This section should therefore be read in conjunction with section 4.

Emissions

Objectives

6.3 The 1992 White Paper set reduced emissions as amongst the key objectives to be fulfilled by the CTP. Following the Treaty of Amsterdam, environmental protection requirements must be integrated into the definition and implementation of the Community policies and activities.

6.4 Both the 2001 White Paper and the 2006 Mid-Term Review promoted a shift in the balance between modes of transport - away from road transport and towards lower emission modes, particularly rail. However, it is important to note that the objectives of the CTP in this area were changed slightly by the Mid-Term Review. The 2001 White Paper targeted modal shift to reverse the growing market share of road transport but the Mid-Term Review qualified this target to seek modal shift only where appropriate, such as over long distances, on congested corridors and in urban areas.

6.5 The 2001 White Paper also emphasised decoupling transport demand growth from GDP growth, but the Mid-Term Review emphasised decoupling demand growth from negative effects such as greenhouse gas emissions.

6.6 These goals were also at the heart of the Sustainable Development Strategy (SDS) adopted by the Gothenburg European Council in 2001 as well as of the Renewed EU Sustainable Development Strategy adopted in June 2006 which set a long term goal of “ensuring that our transport systems meet society’s economic, social and environmental needs whilst minimising their undesirable impacts on the economy, society and the environment”. The SDS also set several operational objectives:

- Decoupling economic growth from the demand for transport;

- Reducing pollutant emissions from transport to levels that minimise effects on human health and/or the environment;
 - Achieving sustainable levels of transport energy use and reducing transport GHG emissions;
 - Achieving a balanced shift towards environment friendly transport modes;
 - Modernising the EU framework for public passenger transport services to encourage better efficiency and performance.
- 6.7 These objectives are consistent with the CTP objectives, although some are quite long term, and it is unlikely to have been possible to achieve all of these within the period reviewed, or just through EU-level action.
- 6.8 The various CTP environmental objectives are interdependent: for example, decoupling and modal shift should lead to reductions in either the absolute amount or growth rate of negative externalities such as greenhouse gas emissions and pollution. It is the reduction in these negative externalities, rather than decoupling and modal shift in themselves, that have been the primary objectives of the CTP since the 2006 Mid-Term Review. We discuss below the measures that have been taken in order to meet these various objectives, and then identify the extent to which each of these objectives have been met.

Measures taken

- 6.9 From the analysis undertaken, it seems that action still needs to be taken to achieve objectives on environmental sustainability, though some progress has already been made. The setting of emission standards, an action that started in the 1970s has already led to a considerable improvement in emissions of air pollutants from motorised transport. Similarly, as part of the EU environmental policy, since the 1990s limits have been set for the atmospheric concentrations of main pollutants, through the Air Quality Framework Directive, though much still needs to be done (especially by Member States) to achieve these targets. To tackle global warming, the EU recently passed legislation aimed at reducing CO₂ emissions from cars and included aviation in the European Emission Trading System (ETS).
- 6.10 However, most of the measures identified for this area are still in progress. In particular, a number of policy proposals relating to environmental pricing and taxation have been made, but few concrete measures have been taken at European level, reflecting the fact that the 2001 Transport White Paper said that the Commission's role was to encourage and facilitate best practice and not interfere in areas of policy which are more appropriately developed by Member States. There are some exceptions to this where action has been proposed or taken at the European level, such as the currently proposed revision of the Eurovignette Directive²⁷ which foresees the possibility to introduce charges that differ according to local pollution and congestion levels; however, it will be for Member States to decide whether or not to introduce such charges.
- 6.11 For instance the Energy Products Directive (2003/96) increased the minimum level of tax applying to transport fuel. This had an impact in many of the new Member

²⁷ COM(2008)436

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States, which had to raise their levels of fuel duty on joining the EU, but its impact in the EU15 States has been limited by the fact that many already applied tax rates that were higher than the minimum required by the Directive. The Commission is currently reviewing this Directive.

- 6.12 The Commission has also sought to promote the use of cleaner vehicles in urban transport, by stimulating good practice, mainly through the support of research projects like CUTE (Clean Urban Transport for Europe) and EU initiatives like CIVITAS. Both CUTE and CIVITAS showed significant results, but they were limited to a number of cities participating to the initiatives, mainly supported the usage of new technology, within tight budgets. On 30 March 2009, the Council adopted a new Directive promoting clean and energy efficient road transport vehicles that are in use by public authorities.
- 6.13 To tackle maritime pollution, various measures have been introduced such as the gradual elimination (phasing out) of the fleet of single-hull tankers and replacing these by double hull tankers; encouragement of the use of shore-side electricity; and the introduction of sanctions for those responsible of causing oil spills or other ship-source type pollution. In addition, the EU has taken actions to tackle sulphur dioxide (SO₂) emissions from ships, working at international level with the International Maritime Organization (IMO), which establishes worldwide rules. The Commission has also proposed that shipping should be included in the post-Kyoto international arrangements to combat climate change and has encouraged ports to introduce fees which encourage less-polluting ships (COM (2007) 616). Given the global nature of the maritime sector, the scope of measures which can be taken through the EU are inevitably more limited than measures which could be taken through the IMO.
- 6.14 Actions are ongoing to address global warming and reduce the dependence of transport from fossil fuels, for example by encouraging the use of biofuels in transport, In 2003, the Directive on the promotion of biofuels and other renewable sources in transport (Directive 2003/30/EC) set indicative targets for road transport biofuels of 2% by the end of 2005 and 5.75% by the end of 2010, although Member States were then allowed to set their national indicative targets. The EU has recently agreed that by 2020 10% of its transport fuel must come from a mixture of renewable sources, including biofuels, and green electricity.
- 6.15 A recent study from the IEA²⁸ reports that several Member States have passed the biofuels Directive into national law, but some have announced indicative targets below that of the Directive. There are also concerns about both the environmental effects of biofuel production, and the adverse socio-economic impacts that it may have. The EU has recently proposed "sustainability criteria" to prevent mass investment in cheaper but environmentally harmful biofuels; however, the criteria identified to date do not take into account for indirect land displacement as a negative effect to be addressed in the production of biofuels.
- 6.16 The Commission is also developing a scheme to grade and label tyres according to rolling resistance (this is of direct relevance for fuel consumption and hence CO₂ emissions) and is planning a proposal for the first half of 2009.

²⁸ IEA report on Biofuel Technologies (2008).

- 6.17 Many of the measures which have been taken in order to improve economic efficiency, described in chapter 4 of this report, also may have environmental benefits. For example, the significant investment in rail infrastructure that has been undertaken through the TEN-T programme might have contributed to modal shift from more polluting forms of transport such as road and air on these corridors. Liberalisation of the rail transport market was also intended to encourage modal shift by making rail operators more competitive.

Impact of the measures

- 6.18 This section outlines the impact of the measures, in terms of the extent to which they have achieved the CTP objectives of:

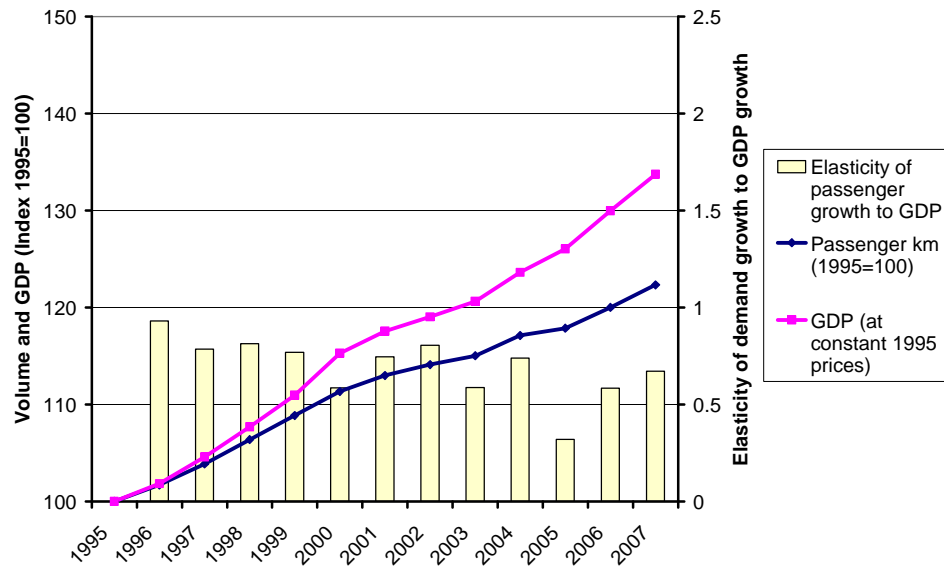
- decoupling transport growth from economic growth;
- achieving modal shift to less polluting modes, particularly rail;
- reducing greenhouse gas emissions; and
- reducing pollutant emissions from transport.

- 6.19 As noted above, the 2001 White Paper emphasised the first two objectives (decoupling and modal shift) but there was a shift in emphasis in the Mid-Term Review to the latter two objectives, to decouple transport from its negative impacts. Decoupling and modal shift can be considered as means towards achieving these objectives.

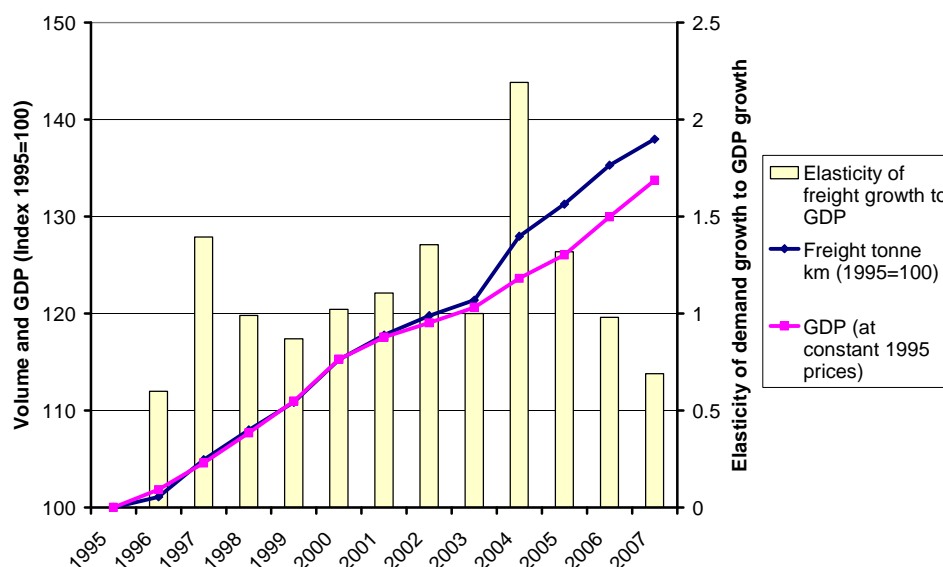
Decoupling

- 6.20 A key objective of the 2001 White Paper was to decouple transport growth from GDP growth. The Commission and the European Environment Agency define decoupling as meaning a reduction in transport intensity, so transport growth is less than GDP growth (the elasticity of transport growth to GDP growth is less than 1).
- 6.21 Therefore, in order to evaluate whether the objective of decoupling has been achieved, we have analysed the rates of growth of both freight and passenger transport, and identified what the elasticity to GDP growth is, and whether it has changed. Figure 6.1 presents this analysis for passenger transport. This shows that the elasticity of transport growth to GDP growth has been less than one throughout this period and therefore the objective of decoupling appears to have been achieved as far as passenger transport is concerned.

FIGURE 6.1 PASSENGER TRANSPORT GROWTH RELATIVE TO GDP GROWTH



- 6.22 However, the figure also shows that the elasticity of transport growth to GDP growth was less than one before the 2001 White Paper, and that there has been at best a marginal change in this elasticity during this period. In our view, it is therefore difficult to attribute decoupling to the CTP. In some ways, decoupling may even have occurred despite the CTP: the liberalisation of air traffic and the subsequent rise of low-cost carriers have boosted the demand for air transport in the EU. Decoupling of passenger transport and GDP has also taken place in a context of continually increasing car ownership, particularly in the new Member States.
- 6.23 Figure 6.2 presents the equivalent analysis for freight transport. This shows that the elasticity of transport growth to GDP growth is on average close to one. In a number of years, it was above one, freight transport having grown by more than GDP. Therefore, the objective of decoupling freight transport growth from GDP growth has not been achieved. This is likely to be due to the effects of increased trade, globalisation, and deeper market integration within Europe, above all due to enlargement.
- 6.24 However, decoupling transport growth from its negative effects has been achieved to some degree. Overall pollutant emissions from transport have fallen considerably despite rising traffic volumes and GHG emissions from transport have also not increased by as much as transport demand, reflecting some improvements in the energy efficiency of transport and in the carbon intensity of the energy used.

FIGURE 6.2 FREIGHT TRANSPORT GROWTH RELATIVE TO GDP GROWTH²⁹

Modal shift

- 6.25 The objective of the 2001 White Paper of achieving modal shift towards rail transport has not been achieved overall, although the decline in the relative share of rail freight appears to have stopped, and passenger rail has increased market share on some corridors. The objective of the Mid-Term Review of achieving modal shift where this is most appropriate may have been achieved, although it is too early to assess this, and assessment is in any case difficult because rail companies usually do not publish route-specific traffic statistics³⁰.
- 6.26 Most of the additional freight traffic registered in the past decade has been transported by road. Road tonne kilometres increased by 49.6% in EU27, and by 2007, road had a modal share of about 45% in intra-EU freight transport. Growth was significantly higher in the new Member States (8.3% per year since 1995), and has accelerated in recent years, as EU enlargement and globalisation have stimulated road freight activity and led to a new (more western) orientation of trade flows. However, the decline in the relative share of rail freight does appear to have stopped: since 2003, rail freight transport has grown by 3.6% per year, similar to the growth rate of road transport.
- 6.27 In the passenger transport sector, the fastest growth has been in air transport (4.5% per year 1995-2007). Overall road transport volumes have increased by 1.6% per year since 1995. The rate of increase of car transport demand was much higher in the EU12 (4.6% per year since 1995) than in the EU15 (1.3% per year), due to:
- the initially lower levels of car ownership of new Member States (242 cars per 1000 inhabitants in 2000, about half that of EU15);

²⁹ There was a change in the data collection methodology in 2004 which explains the higher elasticity for this year.

³⁰ See 2006 study 'Competition and complementarity between air and high speed rail', Steer Davies Gleave for European Commission, for a more detailed discussion of this issue.

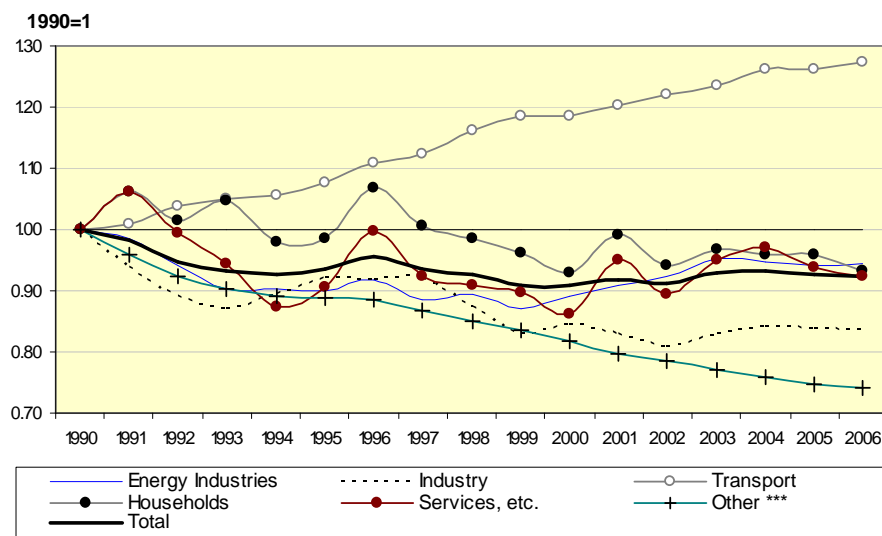
- strong economic growth; and
- in some cases, limited alternative modes.

6.28 Although the overall growth of passenger rail transport has been slow, high speed rail traffic has grown rapidly, from 33 million passenger kilometres to 92 million between 1995 and 2007. Rail traffic has increased significantly on certain corridors such as Madrid-Barcelona, where high speed lines have been constructed, and on corridors where the existing infrastructure has been upgraded, such as London-Manchester. However, these corridors have required very substantial investment, and it is difficult to assess the performance of rail on specific corridors in any detail, because of the lack of detailed traffic statistics.

Greenhouse gas emissions

6.29 In 2006 transport produced 1,297 million tonnes of CO₂ equivalents of greenhouse gas (GHG) emissions³¹, corresponding to about a quarter of total GHG emissions from the EU27. Only energy industries accounted for a higher share (30.9%). Figure 6.3 shows that GHG from the EU’s transport sector have significantly increased since 1990, whilst emissions from other sectors have reduced.

FIGURE 6.3 TRENDS IN GHG EMISSIONS BY SECTOR, EU-27

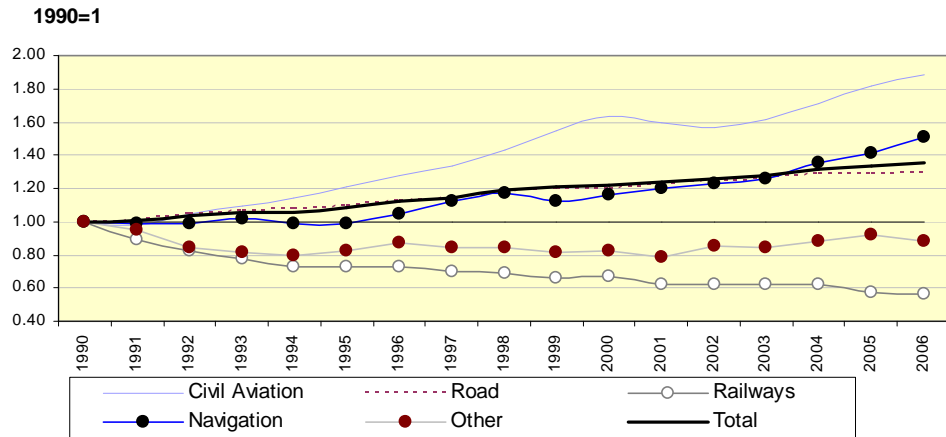


Source: Transport Statistical Pocketbook, 2009, DG TREN.

6.30 Aviation is the fastest growing contributor to GHG emission from transport activities, followed by navigation (shipping). The road sector still generated 71.2% of transport GHG emissions in 2006, despite improvements to fuel efficiency.

³¹ This figure includes also International Bunkers.

FIGURE 6.4 TRENDS IN GHG EMISSIONS BY TRANSPORT MODE, EU27



Source: Transport Statistical Pocketbook, 2009, DG TREN.

- 6.31 The impact of transport growth on GHG emissions has been partially moderated by improved vehicle efficiency and increased use of biofuels. In 2007 biofuels made up 2.6% of road transport fuel and they are expected to account for 4.8% by 2010. Private cars, which represent about 60% of energy consumption from road transport, registered an average improvement in energy efficiency of about 1.5% per year since 1995, reflecting design improvements³². In the aviation sector, improved design of engines and aircraft led to an improvement in energy efficiency of about 1% per year over the period from 1990-2005³³.
- 6.32 Since the 1990s, the majority of EU Member States saw significant increases in transport emissions, principally due to increased transport movements. Germany is an exception, as it has been able to limit GHG growth to 4% between 1990 and 2006 as a result of containment of the growth of road transport demand. This has been achieved by a mix of measures aimed at shifting demand towards rail transport, such as
- the improvement of regulatory framework of passenger and freight rail transport;
 - the increase in fuel taxation; and
 - more recently, the introduction of road charging for HGV vehicles on motorways (although this is an infrastructure charge more than an environmental charge).
- 6.33 Many of the actions taken in the aviation sector (such as inclusion in the ETS and improvements in air traffic management to reduce fuel consumption) have not taken effect as yet. It has been estimated that the full deployment of the SESAR programme in approximately 2020 could allow a substantial reduction of energy consumption (estimated between 300 to 500kg of fuel on average per flight) and environmental pollution (estimated between 945 to 1575kg of CO₂ on average per flight). However, the rate of improvement in energy efficiency is, on current trends, likely to be outweighed by the increase in the number of flights.

³² Source: European Environment Agency, TERM 2006 01. Transport final energy consumption by mode

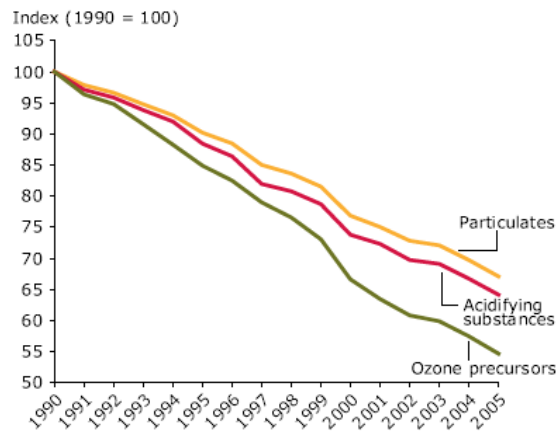
³³ Source: DG TREN (2008) - Energy and Transport Trends 2030, p. 55.

6.34 Given the projected continued growth in transport demand for the period until 2020, it is unlikely that greenhouse gas emissions from transport will decline in absolute terms. However, the measures that have been taken to improve road vehicle and aircraft efficiency, increase use of biofuels in transport, and encourage modal shift where appropriate, have mitigated the impact of transport growth on greenhouse gas emissions. Therefore, to this extent, the CTP has had some success.

Pollutant emissions from transport

6.35 There has been a reduction in other transport emissions in EEA Member States. Changes to vehicle design are helping to decouple these emissions from travel demand. Between 1990 and 2005, emissions of acidifying substances decreased by 36%, ozone precursors by 45% and particulates by 33%. In particular, road transport polluting emissions have reduced due to stricter standards (the EURO standards). Reductions can largely be attributed to advances in exhaust gas after-treatment devices together with improved fuel quality introduced since the early 1990s.

FIGURE 6.5 TRANSPORT EMISSIONS OF AIR POLLUTANTS IN EEA MEMBER COUNTRIES

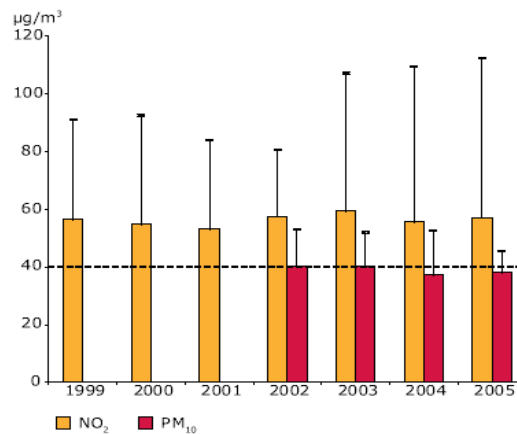


Source: EEA TERM 2008, Climate for transport change

6.36 However, people in European cities continue to be exposed to significant health threats due to air pollution, although this is in part due to sectors other than transport such as residential heating and industry located close to or within cities. A further concern is that there has been an increase in acidifying pollutant emissions from maritime transport, due to traffic growth.

6.37 Data from measuring stations close to major roads indicate that the concentration of NO₂ (2010 limit) and PM₁₀ (2005 limit) are at or above the European air quality limits at many of these sites. Between 2000 and 2005, mean traffic concentrations have remained relatively stable at the selected measuring stations. This indicates that the decrease in transport emissions does not appear to have had a significant impact on local air quality. This could be due to variations in the local distribution of traffic emissions, or emissions from other sources; air quality might however have been worse if transport emissions had not been reduced.

FIGURE 6.6 ANNUAL AVERAGE MEAN NO₂ AND PM₁₀ CONCENTRATIONS AT TRAFFIC MONITORING STATIONS



Source: EEA TERM 2008, Climate for transport change

- 6.38 The EU targets set for particulates and NO_x and PM₁₀ in urban areas have not been achieved because the improved vehicle environmental performances have been outweighed by increased traffic and congestion, and possibly also emissions from other sources. Scope for EU intervention in this area is limited by the principles of subsidiarity and proportionality. It is up to Member States (or regional governments) to take actions to improve local air quality. The key intervention by the EU is to enforce the adoption of these plans. For example the Commission recently opened infringement procedures against 10 Member States for not taking the actions needed to apply for an extension of the timescales set for the more stringent EU air quality limits identified by Directive 2008/50/EC.
- 6.39 This implies, once again, that the level of action can vary significantly amongst Member States, and even within them. Some States, such as Germany and Italy, have been very active in introducing restrictions to the circulation of more polluting vehicles (Low Emission Zones). However, the lower level of enforcement of many Italian schemes makes them much less effective than the German ones.
- 6.40 Greater use of non-motorised transport (walking and cycling) could also help improve local air quality. However, statistics for these modes are not collected in all Member States, and national data is difficult to compare due to different methodologies. Unfortunately the most recent data available is Eurostat data for EU15 Member States for the year 2000, which showed an average annual distance walked of 382km per person in 2000 (ranging from 457km in Luxembourg to 342km in Portugal); cycling rates were much more variable among Member States with Denmark and Netherlands having an average annual cycling distance of 936km and 848km respectively in 2000, more than four times the EU15 average of 188km.

Transport noise

Objectives

- 6.41 Although the 2001 White Paper made a number of references to reducing transport noise, this was not one of the priority policy areas, and few specific actions were identified. In addition, one of the objectives of the Renewed EU Sustainable Development Strategy (SDS) adopted by the European Council in June 2006 was the

reduction of transport noise both at source and through mitigation measures. However, no clear targets have been defined, which makes it difficult to measure whether the objectives have been achieved.

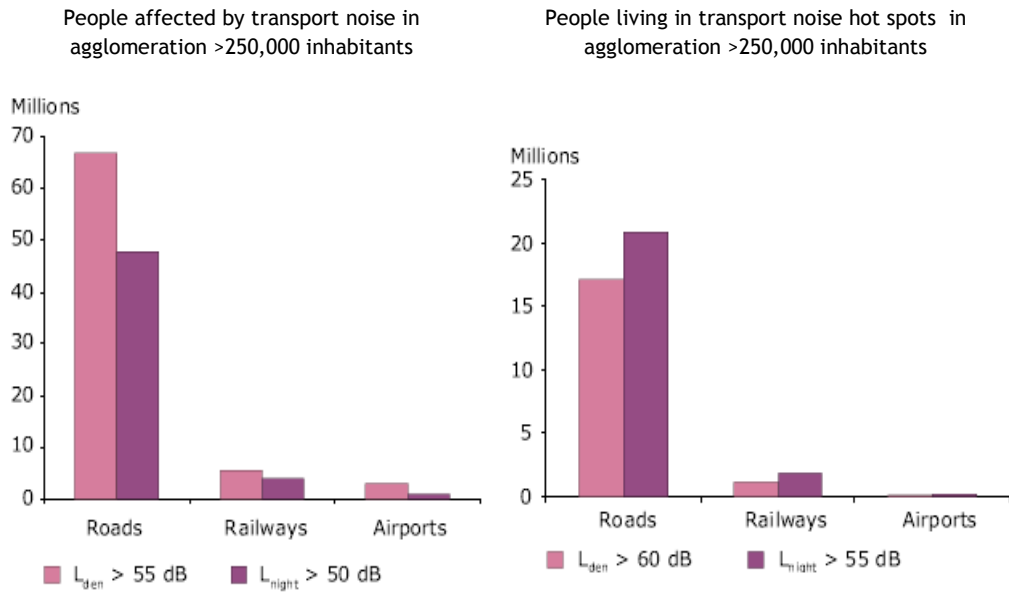
Measures taken

- 6.42 A key area in which measures have been taken is the measurement of transport noise and collection of data. Until recently, European data on exposure to transport noise was scarce. Noise indicators and assessment methodologies were not harmonised across the EU and the ability to compare data between countries was difficult. For this reason, Directive 2002/49/EC on the assessment and management of environmental noise provided a unitary framework for collection of noise indicators in the EU.
- 6.43 Following the provisions of this Directive, in 2007 Member States reported the first set of data on noise exposure in major agglomerations and along major infrastructures. The data comprised information on 162 agglomerations (with more than 250,000 inhabitants), roughly 82,000 km of major roads, approximately 12,000 km of major railways, and 74 major civil airports.
- 6.44 Some progress has also been made in tackling the level of noise externalities in the aviation, rail and road sectors. In the rail sector, the Commission has proposed measures on rail noise abatement measures³⁴, but actions will take several years before delivering results. Noise standards have also been set for road vehicles. A Directive (2002/30/EC) restricting the operation of the noisiest aircraft has been introduced, but to date only five EU airports have applied it (London Gatwick, Heathrow and Stansted; Paris CDG and Madrid).

Impact of the measures

- 6.45 EU action in this area has helped harmonise the collection of data on noise exposure. These data (Figure 6.7 below) show that road transport is by far the largest source of noise: almost 67 million people (i.e. 55 % of the population living in towns with more than 250,000 inhabitants) are exposed to daily road noise levels exceeding 55 dB Lden (the lower benchmark for the combined noise indicator). Almost 48 million people are exposed to levels exceeding 50 dB Lnight, (the lower benchmark for night time noise), with 44% of them exposed to levels exceeding 55 dB Lnight, a level which has detrimental effects on health.

³⁴ COM(2008)432

FIGURE 6.7 NOISE EXPOSURE IN AGGLOMERATION >250,000 INHABITANTS: EU27

Source: TERM 2008 3/2009, Transport at a crossroad, European Environment Agency

- 6.46 However, although data collection has been improved, measures taken to address the level of noise, such as road noise standards, have had only had limited effects. There are some ongoing actions that could deliver significant results such as the revision of the road charging legislation and the promotion of measures for the mitigation of noise emitted by old railway wagons.
- 6.47 In the future, the definition of clearer targets would provide a clearer guide to the appropriate actions to be taken.

Conclusions and lessons learnt

- 6.48 The objectives of the 2001 White Paper relating to decoupling of freight transport growth from GDP growth, and reduction in transport emissions, have not been achieved to date. The objective of decoupling passenger transport growth from GDP growth has been achieved, to the extent that demand growth is slower than GDP growth, but this was also the case before 2001 and there is no clear evidence that the relationship between transport growth and GDP growth has changed. There are a number of reasons why greater decoupling has not been achieved, including greater demand for passenger and freight transport due to globalisation and EU enlargement.
- 6.49 In addition, the objective of modal shift towards rail transport has not been achieved if measured in terms of total transport demand across the EU. However, the relative decline of rail freight does appear to have stopped, and rail has achieved significant growth on specific corridors where there has been investment in high speed rail infrastructure. It is difficult to assess this in detail, because rail operators usually do not publish route-specific traffic statistics.
- 6.50 However, there has been some progress towards meeting the objective set in the Mid-Term Review of decoupling the growth of transport from its negative effects. This primarily reflects progress on fuel efficiency, particularly of road vehicles. Nonetheless, overall greenhouse gas emissions from transport have increased due to

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rapid growth in road, air and sea traffic. A substantial reduction in transport emissions would require a shift away from fossil fuels, but there has been little progress on this and few indications that it will occur in the short to medium term. However, it should be recognised that transport has an essential role in the economy and its growth has helped improve the efficiency and competitiveness of other sectors.

- 6.51 The case study of environmental sustainability measures in Member States (appendix B) shows that the achievement of CTP objectives is strongly dependent on actions taken by Member States. Germany has made significant progress towards meeting the CTP environmental sustainability objectives in the transport sector, largely as a result of national policy measures. The other case study States (Spain and Italy) have not made equivalent progress. Progress has nonetheless been made on specific corridors: for example, Spain has achieved significant mode shift on corridors such as Madrid-Barcelona where high speed rail lines have been opened.

Recommendations

- 6.52 In the future, the EU could build on what has been done in the research and development of cleaner fuels and vehicles, and strengthen its efforts to support the development and adoption of new cleaner technologies in the transport market: reducing emissions by passenger kilometre of the different transport modes is one of the key strategy to tackle climate change, as highlighted by a recent report of the IPCC.³⁵
- 6.53 Other options which could be considered include measures to reduce motorised travel and encourage more sustainable travel choices, such as road user charges and “smarter choices” measures (such as workplace and school travel plans; personalised travel planning; information and marketing; travel awareness campaigns; teleworking; teleconferencing and home shopping). A UK Government review of international experience of smarter choices measures demonstrated that they can deliver reductions in peak period urban traffic of about 21% and nationwide reductions in all traffic of about 11%³⁶.
- 6.54 Policy measures should in general target overall reductions in emissions rather than specifically mode shift. In particular, projects which seek to reduce emissions by shifting traffic to rail may succeed in reducing emissions from other modes, but if the rail service offer is improved, total transport demand and rail emissions will increase. The net result may be a reduction in emissions but this depends on the scale of any new demand generated, the mode any switch was from, and the type of traffic. For example, if a new high speed rail line captures traffic from airlines, this leads to a reduction in emissions, but this could be offset by generation of new demand and transfer of traffic from conventional rail, which produces lower emissions than high speed rail³⁷. The benefits from shifting short distance urban trips to rail or other forms of public transport are likely to be greater, in part

³⁵ IPCC Fourth Assessment Report: Working Group III Report “Mitigation of Climate Change”, Ch 5, Transport and its infrastructure (<http://www.ipcc.ch/ipccreports/ar4-wg3.htm>)

³⁶ HM Treasury, ‘The King Review of low-carbon cars’, 2008

³⁷ To shift or not to shift, that is the question: The environmental performance of the principal modes of freight and passenger transport in the policy-making context; CE, Delft 2003

because car occupancy tends to be lower for these trips and therefore emissions per passenger are higher.

- 6.55 In the longer term, the integration of land use and transport planning should help manage the demand for transport in Europe's towns and cities. Spatial planning can facilitate walking, cycling and the use of public transport for the majority of travel purposes, thereby reducing the negative impacts on the environment of private vehicle use and provide social and economic benefits.
- 6.56 Finally, the availability of reliable and up-to-date transport data is a crucial element to define transport strategy and take actions to achieve the objectives of the CTP. Although significant progresses have been made in this direction (for example the development of TERM indicators), there is still an acute lack of data on which to base transport policy, except in a sub-set of Member States. This applies particularly to the measurement of congestion across Member States, and data for non-motorised transport passenger demand. In addition, the fact that most rail operators do not publish route-specific traffic statistics makes it difficult to evaluate whether policies which have encouraged mode shift on specific corridors have been successful. Given the significant amounts of public funding directed to rail projects, the EU could consider requiring operators which have benefited from this funding to publish more detailed traffic statistics.

7 Summary of assessment of policy measures

- 7.1 This section provides a summary of the assessment of the policy measures.

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TABLE 7.1 SUMMARY OF ASSESSMENT OF POLICY MEASURES

	N#	Measure	Mode	Assessment	Note
Task 1.1	1	Improving the framework conditions for market opening in rail freight transport	Rail	Done	
	2	Opening up the national and international rail freight market	Rail	Done	
	3	Opening up the international passenger rail market	Rail	Done	
	4	Updating interoperability directives on high speed and conventional railway networks	Rail	Done	
	5	Creation of the European Railway Agency (ERA)	Rail	Done	
	6	Standardise certification of train crews and trains on the rail network	Rail	Done	
	7	Harmonise clauses in commercial road transport contracts	Road	Not done	Stakeholders' opposition: the measure was claimed to distort the market
	8	Entering into air service agreements with third countries	Air	Some progress	
	9	Propose a common legal framework for the provision of port services	Maritime	Not done	Lack of political consensus
	10	Monitoring of state aid in transport sector	All	Some progress	
	11	Single European Sky	Air	Some progress	
	12	Improve capacity allocation in the air sector (common rules for slot allocation)	Air	Some progress	
	13	Protection against subsidisation and unfair pricing practices in the supply of air services from third countries	Air	Done	
	14	Transfer of ship register	Maritime	Done	
	15	Simplify the regulatory framework for maritime and inland waterway transport	Maritime	Some progress	
	16	Greater harmonisation of boatmasters' certificates	IWW	Done	
	17	Improve regulatory framework for local transport (Public Service Contracts)	LPT	Done	
	18	PSO to grant access to public transport for social purposes	All	Done	
Task 1.2	19	Develop transport network and remove bottlenecks for rail and road freight and passenger transport	All	Some progress	
	20	Air capacity expansion	Air	Some progress	
	21	Motorways of the sea	Maritime	Some progress	
	22	Improve the navigability of key European inland waterways	IWW	Some progress	
	23	Ensure appropriate funding for TEN-T	All	Some progress	
	24	Funding infrastructure in the New Member States	All/Enlarg.	Some progress	
Task 1.3	25	Improving quality of the rail freight service	Rail	Some progress	
	26	Implement funding programmes (Marco Polo I and II) to sustain intermodality	All	Done	
	27	Promote the development of freight integrators	All	Not done	Many technical barriers hinder their development
	28	Promotion of urban transport practices for goods transport	All	Done	
Task 1.4	29	Produce a Framework Directive on infrastructure pricing principles	All	Not done	However, guidance on infrastructure pricing has been provided
	30	Launch a consultation process on smart charging for infrastructure use	Road	Done	
	31	Methodology for the assessment of external costs for calculation of charges	All	Done	
	32	Produce a Directive to guarantee the interoperability of tolling systems	Road	Done	
	33	Uniform taxation for commercial road transport fuel by 2003	Road	Some progress	
	34	Produce a Directive on energy products with exemption of hydrogen and biofuels	Road	Done	
Task 1.5	35	European Road Safety Action Programme	Road	Done	
	36	Reduction of road fatalities: vehicle technical progress	Road	Done	
	37	Reduction of road fatalities: drawing-up of technical guidelines concerning infrastructure safety	Road	Done	
	38	Reduction of road fatalities: harmonisation of road safety checks, penalties and training	Road	Done	

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N#	Measure	Mode	Assessment	Note
39	Harmonisation of driving licences	Road	Done	
40	Harmonisation of minimum safety standards in tunnels	Tunnels	Done	
41	Developing accident data collection, analysis and dissemination	Road	Done	
42	Creation of a common regulatory framework for railway safety	Rail	Some progress	
43	Creation of the European Aviation Safety Agency (EASA)	Air	Done	
44	Safety of third country aircraft	Air	Done	
45	European Maritime Safety Agency and safety rules for passenger ships	Maritime	Some progress	
46	Port state controls	Maritime	Some progress	
47	Ship and port facility security	Maritime	Done	
48	Security rules at airports	Air	Done	
49	Enhancing supply chain security	Road/rail	Some progress	
Task 1.6	50 Social harmonisation of road transport	Road	Done	
	51 Training for professional drivers	Road	Done	
	52 Introduction of the digital tachograph	Road	Done	
	53 Social legislation inland waterway transport	IWW	Some progress	
	54 Training for seafarers	Maritime	Done	
Task 1.7	55 Publish information on the performance of different airlines	Air	Not done	Due to non co-operation by airlines
	56 Improve passenger protection in case of denied boarding, delays or cancellations	Air	Done	
	57 Ensure conditions of contract are fair	Air	Some progress	
	58 Improve enforcement of passenger rights	Air	Some progress	
	59 Improve protection of passengers with reduced mobility	Air	Done	
	60 Extend passenger rights to other transport modes	All	Some progress	
Task 1.8	61 Euro emission standards	Road	Done	
	62 Air quality directive	All/Road	Done	
	63 Ensuring that pricing and taxation mechanisms better reflect vehicles environmental and health damages	Road	Some progress	
	64 Promote the use of clean vehicles in urban public transport	LTP	Some progress	
	65 Double hull oil tankers, penal sanctions for ship source pollution and other measures to limit maritime pollution	Maritime	Some progress	
	66 Oil pollution damage compensation fund	Maritime	Done	
	67 Sulphur content of marine fuel	Maritime	Some progress	
	68 Community support for noise charges and introduction of noise-related operating restrictions at Community airports	Air	Some progress	
	69 Reduction at source and other actions to reduce noise in the rail sector	Rail	Some progress	
	70 EU noise standards and other measures to reduce noise externalities in the road sector	Road	Some progress	
	71 Promotion of biofuels in road transport	Road	Some progress	
	72 Measure to reduce CO2 emissions from cars	Road	Done	
	73 Rules on vehicle labelling to promote most energy-efficient vehicles	Road	Some progress	
	74 Inclusion of aviation in the ETS and other measures	Air	Done	
	75 Recommendation on the promotion of the shore-side electricity for use by ships at berth in EU ports	Maritime	Some progress	
	76 R&D in transport energy efficiency and in reduction of reliance on fossil fuels	All	Done	

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	N#	Measure	Mode	Assessment	Note
Task 1.9	77	Support for pioneering towns and cities - CIVITAS	Urban	Some progress	
	78	Promotion of research and furthering experience	Urban	Some progress	
	79	Publication of Green Paper on urban transport	Urban	Done	
	80	Consultation following Green Paper on urban transport	Urban	Done	
	81	Publication of Action Plan on urban mobility	Urban	Not done	Concerns about subsidiarity have stalled this process
Task 1.10	82	ITS in air transport	Air	Some progress	
	83	ITS in maritime transport	Maritime	Some progress	
	84	ITS in rail transport	Rail	Some progress	
	85	ITS in road transport	Road	Some progress	
	86	ITS in inland waterways	IWW	Some progress	
	87	Galileo	All	Some progress	
	88	ICT in specific areas: freight transport and urban passenger transport	All	Some progress	

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List of appendices (provided as separate documents)

Appendix A

Task 1 reports:

- Task 1.1: Market opening, regulation and enforcement
- Task 1.2: The planning and financing of trans-European transport networks
- Task 1.3: Logistics, inter- and co-modality (including Marco Polo)
- Task 1.4: Pricing and taxation
- Task 1.5: Safety and security measures
- Task 1.6: Social aspects
- Task 1.7: Level of service quality and user aspects such as passenger rights
- Task 1.8: Environmental sustainability and transport-related energy issues
- Task 1.9: Urban transport
- Task 1.10: Intelligent transport systems and other transport-related research outcomes

Appendix B

Task 2 reports:

- Task 2.1: Italy
- Task 2.2: Spain
- Task 2.3: Germany