

ASSIST



ASsessing the **Social** and economic **Impacts** of past and future **Sustainable Transport** policy in Europe

Summary of results regarding
impact assessments of
selected TPMs

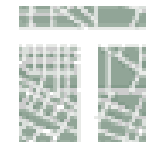


ASSIST



ASsessing the **S**ocial and economic **I**mpacts of past and future **S**ustainable **T**ransport policy in Europe

Consortium partners



Background and information

Following slides show resumed results of impact assessments for selected 'transport policy measures' (TPM).

The impact assessment (for each TPM) is documented in **fact sheets** They provide an overview on the most significant impacts distinguished by segments and social groups.

Subsequent slides show the summary of initial impact assessments of selected 20 TPMs. The assessments are given by three different colours:

- impacts are positive with regard to European transport policy objectives
- impacts are insignificant with regard to European transport policy objectives
- Impacts are negative with regard to European transport policy objectives

Category: x
Subcategory: x.x
TPM:

Description



Objective



Traffic Impacts		
Economic Impacts		
Social Impacts		
Environmental Impacts		



Category: 1 Pricing
 Subcategory: 1.1 Infrastructure Charging / Access Restrictions Schemes
 TPM: **Eurovignette Directive**

Description The Eurovignette Directives (99/62 and 2006/38): recommend the introduction of tolls in all EU countries, requiring hauliers to pay when travelling in the interurban high capacity roads and main roads. The revision of the directive (2011): introduces the external cost charge.

Objective

- to ensure national toll systems reflect the 'external costs' of transport
- to cross finance a 'modal shift' of freight away from roads (rail, iww)
- reduce pollution from road freight transport

Traffic Impacts	Decrease of HGV mileage, travel and transport time	●
Economic Impacts	Road transport users/shippers/consumers have to carry the financial burden of the toll	●
	High implementation costs (operation and administration)	●
	Improvement of infrastructure (road infrastructure; rail and IWW)	●
Social Impacts	Positive contribution to social cohesion on a regional level: authorities may decide to exempt isolated areas or economically weak regions from applying tolls or user charges	●
Env. Impacts	Reduction of noise levels and pollution	●

Category: 1 Pricing
 Subcategory: 1.2 External cost charges
 TPM: **Inclusion of air transport into the EU-ETS in 2012**

Description Since 2012 emissions from all domestic and international flights that arrive at or depart from an EU airport are covered by the EU Emissions Trading System: "cap and trade" scheme. This implies a cap on the total level of emissions for the aviation sector; a fixed number of emissions allowances to airlines can be traded.

Objective

- To tackle the climate impact of aviation: in 2020 CO2 emissions will be 21% lower than in 2005.

Traffic Impacts	Aviation activity is estimated to grow at a lower rate than without EU-ETS (about 2.5% p.a.; exceeding 3% until 2015 and less thereafter)	
Economic Impacts	Airlines' profits may fall when emissions trading is introduced even though ticket prices are likely to rise. Price increases would be likely to be caused by the additional costs of having to buy or hold allowances and the result of fewer journeys sold.	
	Alternative modes, especially rail operators, may benefit.	
Social Impacts	No social impacts	
Env. Impacts	Reduction of yearly CO2 emissions by 0.09% (allowance price of €5), 0.23% (€20) and – 0.23% (allowance price of €40) in 2020 compared with no action scenarios.	



Category: 2 Taxation
 Subcategory: 2.1 Fuel Taxation
 TPM: **Energy Taxation Directive' (2003/96/EC)**

Description The Energy Tax Directive 2003/96/EC represents the Community framework for the taxation of energy products and electricity. The highest minimum tax rates were introduced for oil fuels (excl. international aviation and shipping). Coal and electricity minimum tax rates were introduced.

Objective

- To reduce emissions and influence consumer behavior
- To give a big push to the use of renewable energy sources (RES)
- To encourage the industry to select low-energy products

Traffic Impacts	Decrease in vehicle mileage for road and rail transport;	●
	Increase of public transport.	●
Economic Impacts	An increase in transport cost for road and rail can be expected due to higher fuel costs.	●
Social Impacts	Health benefits	●
Environmental Impacts	Reductions in GHG (CO2 and NOx) and air pollutants (PM)	●



Category: 3 Infrastructure
 Subcategory: 3.2 European TEN-T network – cross border missing links
 TPM: **Reduction of TEN-T network (cross border) missing links**

Description The European Union does not dispose yet of a complete trans-European infrastructure network, and especially not for rail and inland waterways, where essential parts are still missing and constitute important bottlenecks. The infrastructure network in the EU today is indeed fragmented, both from a geographical and a multi-modal perspective. It is also not sufficiently integrated in the international trade flows that feed the European internal market.

Objective The overall aim of the TPM is to provide by 2030 for the establishment of a complete and integrated TEN-T that would maximise the value added for Europe of the network. This optimal network would cover and link all EU Member States in an intermodal and interoperable manner.

Traffic Impacts	Reduction of travel/transport times and risk of congestion.	●
	Improve service and comfort	●
Economic Impacts	Reduction of transport costs (savings for transport sector), stimulating economic growth	●
	Improve competitiveness of transport sector (especially rail and iww), access to third countries and any international relations.	●
Social Impacts	Better accessibility to transport systems and increase of employment!	●
Environmental Impacts	Decrease of air pollution and noise emissions, while worsening visual quality and landscape.	●

Category: 3 Infrastructure
 Subcategory: 3.4 EU transport infrastructure in view of energy efficiency needs and climate change challenges
 TPM: **Green corridors**

Description The concept of transport corridors is marked by a concentration of freight traffic between major hubs and by relatively long distances of transport. Green corridors could be used to experiment with environmentally-friendly, innovative transport units, and with advanced ITS applications.

Objective The aim is to support energy efficiency and sustainability, reduce carbon diowide emission, and better integration of transport modes

Traffic Impacts	Reduction of travel/transport times for both road, rail and iww,	●
	Support mode shift towards rail and iww (green modes)	●
Economic Impacts	Reduction of transport costs (savings for transport sector)	●
	More competitive transport sector.	●
Social Impacts	Benefit for workers in the transport sector (health, oppurtunities, employment, labour markets), and the society.	●
Environmental Impacts	Decrease of air pollution and noise emissions.	●



Category: 3 Infrastructure
 Subcategory: 3.6 Capacity and quality of transport systems
 TPM: **Bus priority lane**

Description Bus priority lanes give priority to buses and save journey time where roads are congested with other traffic. The measures include segregation, traffic management, traffic signal control and bus stop improvements.

Objective Facilitating the provision of a faster, more frequent and more reliable bus service

Traffic Impacts	Reduction of travel times and risk of congestion for public transport, while increasing service and comfort.	●
	Possible increase of travel times for car users	●
Economic Impacts	Increase of transport costs for car users.	●
	Increase in sectoral competitiveness and revenues for public transport operators.	●
Social Impacts	Improve safety and health for residents, and safety for pt users	●
Environmental Impacts	Decrease of air pollution and noise emissions, therefore significant improvement of liveability for residents	●



Category: 3 Infrastructure
 Subcategory: 3.2 Intelligent Transport System (ITS)
 TPM: **Deployment of roadside-based ITS infrastructure for information services**

Description The increasing demand for mobility (both people and goods), the environmental problems and road safety require a high performance road transport system where drivers, vehicles and infrastructure are integrated into one reliable, efficient and smart transport system. These objectives can be realised by services and systems supported by an integrated approach of intelligent vehicles and intelligent infrastructure supporting the driver.

- Objective**
- **Reduce congestion**
 - **Avoid accidents**
 - Increase road safety and security
 - Reduce environmental problems

Traffic Impacts	Strong decrease in risk of congestion	●
	Significant improvement in transport times and service and comfort.	●
Economic Impacts	Reduction of transport costs	●
	Reduction of health and insurance costs.	●
Social Impacts	Strong improvement of safety , even security.	●
Environmental Impacts	Decrease of pollutant emissions, while worsening visual quality through roadside infrastructure possible..	●



Category: 4 Internal Markets
 Subcategory: 4.1 Internal Market (intramodal) - road
TPM: Elimination of restrictions on cabotage

Description No restrictions on transport of passengers and goods within one EU country by a haulier / carrier from another EU country

Objective Achieve a single European road transport market

Traffic Impacts	Reduction of vehicle mileage (less empty trips)	●
	Lowering risk of congestion	●
Economic Impacts	Decrease in transport costs	●
	Impact on revenues and competitiveness depend on the country	●
	Negative impact on the wages of the workers in the sector	●
	Reduction of costs of consumption / for consumers	●
Social Impacts	Increase in road safety due to reduced traffic	●
Environmental Impacts	Reduction of air pollutants and positive impact on climate due to reduced vehicle mileage	●



Category: 4 Internal markets
 Subcategory: 4.4 Internal Market (intramodal) - aviation
 TPM: **Single European Sky ATM Research (SESAR)**

Description Based on Single European sky (SES) initiative which is the legislative approach to harmonise air traffic architecture on EU level
 Objective Harmonising the European ATM (Air Traffic Management) network by closing the rank between ground and air by fastening and simplifying their information exchange







Traffic Impacts	Decreasing travel / transport time and vehicle mileage	●
	Less delays/deviations, higher efficiency, comfort and capacity	●
Economic Impacts	Reduction of transport costs, improving productivity and higher wages within aviation sector	●
	Positive direct, indirect and induced effects on economy	●
Social Impacts	Increase of level of safety, security and health	●
	Lower aviation prices strengthens the social inclusion	●
Environmental Impacts	Less air and noise emissions, positive effect on climate	●

Category: 5 Efficiency standards & Flanking Measures
 Subcategory: 5.3 Standards - Environment
 TPM: **European directives: emission standards Euro V**

Description Euro V defines the acceptable limits for exhaust emissions of new vehicles sold in EU member states, especially regarding emissions of carbon monoxide (CO), hydrocarbons (HC), nitrogen oxides (NOx), particulate matter (PM) and Smoke.

Objective

- To set harmonised rules on the construction of motor vehicles
- To improve air quality by reducing pollutants emitted from the road transport sector

Traffic Impacts	No significant impacts	
Economic Impacts	Car and lorry manufacturing industry increases its competitiveness from developments in clean vehicle engine design;	
	Less expenditures on public health	
	Private households: higher vehicle purchasing costs vs. greater fuel efficiency (less operating costs)	
Social Impacts	Health benefits	
Environmental Impacts	Reductions in GHG (CO2 and NOx) and air pollutants (PM)	

Category: 5 Efficiency standards & Flanking Measures
 Subcategory: 5.1 Standards - Transport Safety
 TPM: **European Road Safety Action Programme RSAP (2001-2010)**

Description The RSAP proposes a series of measures such as stepping up checks on road traffic, deploying new road safety technologies, improving road infrastructure and measures to improve users' behaviour.

Objective

- To reduce the number of accidents;
- To reduce the severity of the accidents in terms of fatalities

Traffic Impacts	Reduction of the risk of congestion;	●
	Decreased travel speeds lead to an increase of the average travel or transport time	●
Economic Impacts	The reduction of accidents reduces the amount of health service costs.	●
	Operating costs can increase if the average travel time increases (speed restrictions)	●
Social Impacts	Increased health and well-being (especially for young and elderly pedestrians and cyclists)	●
Environmental Impacts	Lower level of emissions, less noise and energy consumption (due to slower speed and reduced congestion)	●

Category: 6 Transport planning
 Subcategory: 6.1 Mobility strategies and plans
 TPM: **Promoting car-sharing / car clubs**








Description Support national / regional governments to extend car sharing; implying a car rental for short periods of time.

Objective Reduction of car ownership and usage without restricting mobility

Traffic Impacts	Increase of transport time and decrease of comfort	●
	Reduction of road vehicle mileage (Increasing usage of public transport and slow modes) and slight decrease of congestion	●
Economic Impacts	Decrease of transport costs for car users with a low vehicle mileage	●
	Subsidies affect an increase of public expenditures	●
Social Impacts	Better accessibility to the transport system road, even for low income groups	●
	Higher social inclusion, car usage becomes affordable	●
Environmental Impacts	Reduction of air pollutants and noise emissions	●
	Reduction of land use (less parking space needed)	●

Category: 6 Transport planning
 Subcategory: 6.2 Urban mobility – plans and audits
 TPM: **Park and ride systems (urban)**

Description Car parking facilities mostly at the urban periphery linked to the cities' public transportation system and used to shift modes
 Objective Reduce private vehicles in cities and congestion and enhance modal shift to public passenger transport

Traffic Impacts	Indifferent effects on travel/transport time, Reduction of comfort	
	Reduction of inner city traffic and congestion and increasing public transport vehicle mileage	
Economic Impacts	Public costs reduction due to less road maintenance and parking facilities	
	Growing spatial competition between cities	
Social Impacts	Increasing urban safety, especially for children, elder people and slow mode users	
	Improvement of public transport accessibility	
Environmental Impacts	Effecting residents health (by air and noise emissions) within as well as outside the urban area	

Category: 6 Transport planning
 Subcategory: 6.5 Urban mobility – Urban logistic strategies
 TPM: **City logistics**

Description Urban freight distribution concept, often by means of consolidation centres which are logistics facilities situated in relatively close proximity to urban areas serving a city centre, a entire town or a specific site.

Objective Reduction of freight traffic in urban areas

Traffic Impacts	Reduction of travel and transport time for long distance haulage	●
	Less congestion and vehicle mileage	●
Economic Impacts	Lower transportation costs	●
	Increase of public income, due to optimisation of personnel deployment, efficient planning and enhanced capacity	●
	Reduction of delivery lead times & improving product availability	●
Social Impacts	Increasing road safety, quality of life, accessibility of city centres, positive impacts on health	●
Environmental Impacts	Reduction of air pollutants & noise emissions, positive impacts on climate and resources	●

Category: 6 Transport planning
 Subcategory: 6.6 Urban mobility – Zero/low emission strategies
 TPM: **Low emission zones / Environmental zones**

Description Low emission zones (LEZ) are mostly urban areas where the operation of specific transport vehicles (for passenger and/or freight) is prohibited or subject to emission standards

Objective Reduction of air pollutants

Traffic Impacts	Reduction of traffic in LEZ as long as vehicles do not meet the emission standards	●
	Possible increase of vehicle-km outside the LEZ	●
Economic Impacts	Increase in traffic costs	●
	Contribution to modernise the car fleet	●
	Increase of the value of real estate in LEZ	●
Social Impacts	Benefits for residents and the society in LEZ (health, safety and employment)	●
Environmental Impacts	Positive impacts on residents, society and partly climate due to less air (PM, CO, NO _x , HC) and noise emissions	●

Category: 7 Research and innovation
 Subcategory: 7.1 Technology - vehicle
 TPM: **Electromobility - road**

Description Support for research and development of electric vehicles. This includes vehicles for private passenger transportation, public transportation and light-duty freight vehicles.

Objective Reduction of air pollutants and noise emissions, strengthening climate protection and the independence from oil

Traffic Impacts	The lower trip range reduces the vehicle mileage	●
Economic Impacts	Higher vehicle costs lead to increasing transport costs and cut revenues of transport operators & service providers	●
	Increased R&D strengthens the economy's competitiveness	●
Social Impacts	Positive health effects due to reduced emissions	●
	Support of R&D has a positive effect on the labour market	●
Environmental Impacts	Dependent on energy input/supply. Increased usage of renewable energies and thus more climate friendly	●
	Reduced emissions (air, noise)	●

Category: 7 Research and Innovation
 Subcategory: 7.2 Technology – Transport information systems, management & service
 TPM: **E-Freight**

Description Improve the freight transport management by creating a single digital transport document (incl. standard interface) valid for all modes
 Objective Simplify the information exchange of freight and transport; Improve the identification and location of freight and multimodal transport

Traffic Impacts	Decreasing transport time and congestion risk by more automated operations leading to a reduction of delays/errors	●
	Enhance the service level of freight transport	●
Economic Impacts	Decreasing transport costs at all modes enhancing multimodal transport and competitiveness (sectoral/spatial)	●
	Efficiency and effectiveness gains in logistic operations increase revenues of operators and economy	●
Social Impacts	Extended and highly automated security check	●
	Road safety reinforcement	●
Environmental Impacts	Decrease of air (and noise emissions) will positively affect climate and save resources	●

Category: 7 Research and innovation
 Subcategory: 7.4 Framework – transport safety
 TPM: **European Rail Traffic Management System ERTMS**

Description The implementation of ERTMS will harmonise the European signalling and speed control system by introducing one system.

Objective Ensure the technical interoperability of the rail system and increase its safety.

Traffic Impacts	Reduction in transport time	●
	More reliable system enhances service and comfort	●
Economic Impacts	Reduced operating costs and a higher competitiveness	●
	Higher costs of investment	●
Social Impacts	Increasing safety of transport system	●
	Increase in the job quality	●
Environmental Impacts	Emission reduction (air, noise) and positive effect on climate	●
	Usage of renewable energy depending on the source of electricity used in the rail sector affected by modal shift	●

Category: 8 Other
 Subcategory: 8.1 Alternative commute solutions
 TPM: **Promotion of flexible working hours (and opening hours)**

Description The flexibility of working time refer to length and distribution of working time (e.g. flexitime, compressed work week, shifts, etc.). Variety of goals: enterprise competitiveness, balance company/private life, etc.

Objective Transport perspective: demand management, preventing congestion and supporting efficient use of transport services

Traffic Impacts	New trips distribution during the day: less congestion, reduced transport time for road transport (mainly during peak hour)	●
	Compressed work weeks: more trips for non-commuting purposes might be generated	●
	Possible mode shift (public transport to car or vice-versa)	●
Economic Impacts	Possible saving of car passenger costs, if reduced use	●
	Competitiveness of enterprise might be increased	●
Social Impacts	Residents: increased job satisfaction and quality of life expected	●
	Increased equality treatment, employment and productivity	●
Environmental Impacts	Possible positive impacts on air pollution, noise emission and climate change	●

Category: 8 Other
 Subcategory: 8.1 Alternative commute solutions
 TPM: **Promotion of teleworking**

Description Teleworking is a method of organising/performing work in which a proportion of working time is spent away from the office, using information technology. Various forms: home-based, mobile, teleconferencing, etc.

Objective Transport perspective: reducing commuting trips (and therefore congestion and related pollutant emissions)

Traffic Impacts	Reduction of commuting trips: less congestion, reduced transport time for road transport (mainly during peak hour)	●
	More trips for non-commuting purposes might be generated	●
	Particularly attractive to long-distance commuters: vkm reduction	●
Economic Impacts	Possible saving of car passenger costs, if reduced use	●
	Competitiveness of enterprise might be increased	●
Social Impacts	Residents: increased job satisfaction and quality of life expected	●
	Possible increase of employment and productivity	●
Environmental Impacts	Possible positive impacts on air pollution, noise emission and climate change	●
	It might encourage more dispersed land use (sprawl)	●