Measure 47: 3rd European Road Safety Action programme

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Policy package:
1D: Road Safety, quality and environment

Measure 47:
European Road Safety Action Programme: halving the number of road accident victims in the European Union by 2010.

What is the problem being addressed ?
This measure represents the overall framework of road safety measures (Measures 47 to 56) which constitute numerically 13% of all WP measures. This indicates that it embodies a very relevant importance in the WP context, which is shared also by individual countries programs and endeavours.
Indeed, ever greater mobility comes at a high price: 1.300.000 accidents a year cause 40.000 deaths and 1.700.000 injuries on the roads. The direct and indirect cost of this carnage has been estimated at € 160 billion, i.e. 2% of EU GNP. In the White Paper, the Commission has therefore proposed that the European Union should set itself the target of halving the number of road deaths by 2010. Although the Community has contributed to road safety over many years, in particular through more than 50 technical standardisation directives, and despite the fact that Maastricht Treaty clarified the legal means available to the Community to establish a framework and to act, the Member States have been highly reluctant to take action at Community level. Therefore, the new road safety action programme will develop several measures along three pillars:

- encourage road users to improve their behaviour, in particular through better compliance with the existing legislation and pursuing efforts to combat dangerous practices;
- make vehicles safer, in particular through technical harmonisation and support for technical progress;
- improve road infrastructure, in particular by defining best practices and disseminating them at the local level and by eliminating accident black spots.

Measure's costs and/or benefits:
The measures likely to permit achieving the target of halving are discussed in detail (Nr.s 48 to 56). The total cost of the road safety action programme is disaggregated in:

- definition & adoption of stricter road code & driving regulations
- enforcement of above code & regulations
- improvement of signals design, structure, visibility
- improvement of infrastructures
- vehicle design, instruments, maintenance (engine, brakes, lights, tires)
- vehicle production embodying new safer design
- driver education & rehabilitation, multi-target awareness campaigns
- integration of international, national, regional, municipal actions and rules

Legislative implementation at the EU level:
COM (2003) 311 European road safety action programme. Halving the number of road accident victims in the European Union: a shared responsibility. This 3rd European Road Safety Action Programme was adopted by the Commission in June 2003, and endorsed by the Transport Council on 5 June 2003. The 3rd Action Programme proposes an overall framework of actions to be undertaken at the Member State and regional level in the timeframe 2003-2010. It includes most of the measures described in the following fiches from 48 to 56, which identify the related Directives, Communications, and Decisions.

What are the objectives ?
Probability of achievement would appear to be very high since (as noted in WP) in the last 30 years the road safety situation has improved markedly. Number of deaths in road traffic accidents was 77,831 in 1970 and decreased (by 46%) to 40,822 in 2000 - although the number of passenger.km driven in 2000 (3.789 G p.km) increased 2.38 times with respect to 1970 (1,589 G p.km) and although in the Seventies

half of European countries classified a death as due to traffic only if it occurred within 1 to 7 days from the accident. Now all countries extend that period to 30 days.
However a closer analysis shows that in some South European countries the number of fatalities is still increasing, due to a consistent increase in vehicle parks. In other, e.g. Italy, the number of fatalities is hovering around a level lower than the one of decades ago, but higher than the minimum achieved e.g. by UK, Sweden, Finland, Netherlands.
Moreover, the overall passenger and freight transport volumes are expected to continue their growth, and therefore to further limit the number of deaths will require further development and implementation of accident preventing policies. There are also the challenges which arise as the result of the enlargement to EU 25 Member States. In the new Member States the road safety situation at present is not as good as in the EU-15. Adjusted to the population level, the number of people killed and injured is not higher, but the respective ratios are deceptive since they do not take into account the number of vehicles on the road or the volume of traffic, both of which are much lower. The risk exposure factors are therefore much greater, and there will be the need in these countries for drastic measures to avoid an "automatic" increase in the number of road victims.

Interactions with other WP measures:
The single major positive impact of increased safety on transport systems will be to reduce drastically the waste of money due to damages. Positive consequences entail diminished liabilities for insurance companies, hence a gradual reduction of premiums paid. A broader positive impact will be the reduction of the human burden of sufferance and pain inflicted to maimed users and to the families of fatalities.
The above improvements in the economy of road transport will tend to make choice of road mode more attractive. Hence success of this measure (jointly with measures 48 to 56) will tend to counterbalance or contrast Measures 6 to 16 intended to revitalise railways.

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Output indicators:
As noted in Measure's costs, the measures likely to achieve the target of halving are discussed in detail (Nr.s 48 to 56) where different implementation headings will be analysed.

- Adoption of new driving, safety rules, their quality & enforcement
- Definition, design of better signals and actual installation
- Redesign of infrastructures improvements and actual installation
- Redefinition of safety standards for vehicles and actual use by manufacturers
- Driver education programs, quality and dissemination
- Wide spectrum safety campaigns, not generic, but aimed at each possible cause of accident (see in the Annex - Prescriptions to reduce by half the number of road deaths in Europe)

The final output expected from these measure can be measured directly through the improvements in road safety they induce. Therefore, suggested indicators are:

- Total number of road fatalities per year: the number of person killed in road accidents in the EU15 countries is shown in the table below and the total EU15 road transport fatalities in the following graph (source TERM 2003 – Number of transport accidents, fatalities and injuries indicator fact sheet).

Table 1: Number of persons killed in road accidents

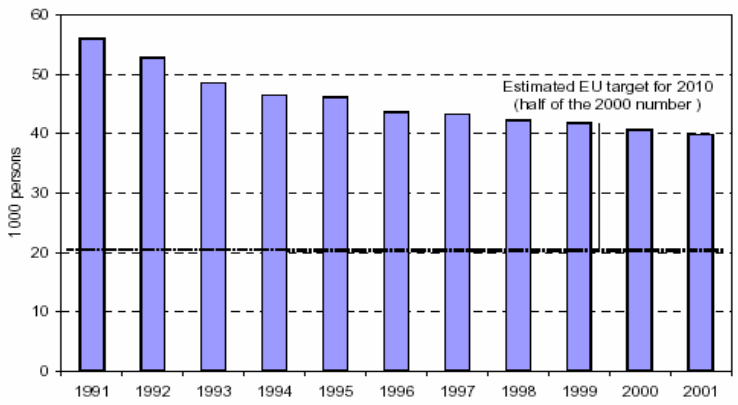
Unit: persons

	1991	1995	1996	1997	1998	1999	2000	2001	Change 1991/2001
Belgium	1 873	1 449	1 356	1 364	1 500	1 397	1 470	1 486	-21 %
Denmark	606	582	514	489	499	514	498	431	-29 %
Germany	11 300	9 454	8 758	8 549	7 792	7 772	7 503	6 977	-38 %
Greece	2 112	2 411	2 157	2 105	2 182	2 116	2 037	1 895	-10 %
Spain	8 836	5 749	5 482	5 604	5 957	5 738	5 777	5 516	-38 %
France	10 480	8 891	8 541	8 444	8 918	8 487	8 079	8 160	-22 %
Ireland	445	437	453	473	458	414	418	412	-7 %
Italy	8 109	7 020	6 676	6 713	6 314	6 633	6 410	6 682	-18 %
Luxembourg	83	70	71	60	57	58	70	69	-17 %
Netherlands	1 281	1 334	1 180	1 163	1 066	1 090	1 082	993	-22 %
Austria	1 551	1 210	1 027	1 105	963	1 079	976	958	-38 %
Portugal	3 218	2 711	2 730	2 521	2 126	2 028	1 874	1 671	-48 %
Finland	632	441	404	438	400	431	396	433	-31 %
Sweden	745	572	537	541	531	580	591	583	-22 %
United Kingdom	4 753	3 765	3 740	3 743	3 581	3 564	3 580	3 598	-24 %
EU-15	**56 024**	**46 096**	**43 626**	**43 312**	**42 344**	**41 901**	**40 761**	**39 864**	**-29 %**
Iceland		24	10	15	27	21	32		88 %
Norway		305	255	303	352	304	341	275	-2 %
Switzerland		692	616	587	597	583	592	544	-25 %

NB: Data for Iceland, Norway and Switzerland are from UNECE, 2001. The reduction percentages for these countries are calculated over the period between 1993 and 2000/01.

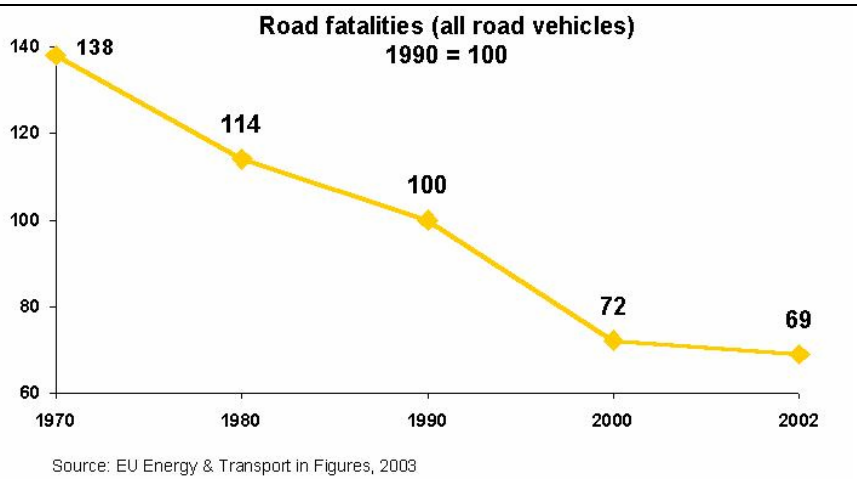
Sources: CARE, 2003; UNECE, 2001.

Figure 1: Road transport fatalities per year in EU-15



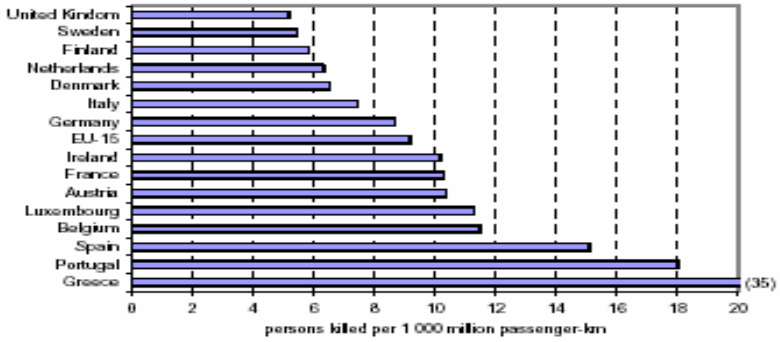
Source: CARE, 2003.

Even though the number of road fatalities in the EU15 fell by 29% between 1991 and 2001, from 56000 to about 40000, this still correspond to 110 persons killed each day on European roads: the equivalent of one medium-size aircraft crashing somewhere in Europe each day. The EU15 road fatalities index (base year 1990 = 100; all vehicles included) was at 138 in the year 1970 and declined to a value of 69 in 2002 (DGTREN-Eurostat, 2003):



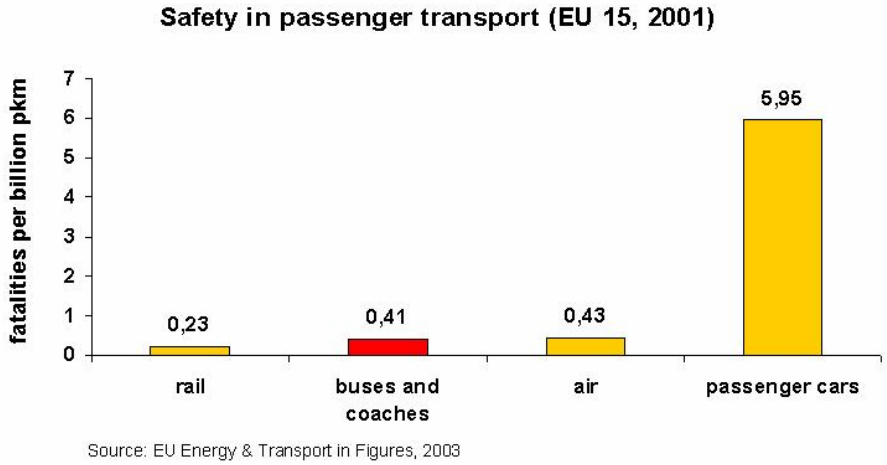
Source: EU Energy & Transport in Figures, 2003

- Fatality rates (persons killed per billion passenger-kilometres): the road fatality rate decreased by almost 15% between 1994 and 2000 in the EU15. In all Member States, the fatality rates decreased, but the difference between Member States are quite significant, as can be seen in the figure below. Greece, Portugal and Spain showed the highest fatality rates. These data seem to confirm that simply imitating the measures adopted in the safer countries (UK, Sweden, Finland, Netherlands) could improve a lot the situation in the most unsafe countries.



Sources: CARE, 2003; Eurostat, 2002.

In addition, it is important to note that any shift from road to other transport modes can increase overall safety in passenger transport, considering that the fatalities per billion passenger.km are an order of magnitude greater for road than for the other transport modes, as illustrated for EU15 in the following figure:

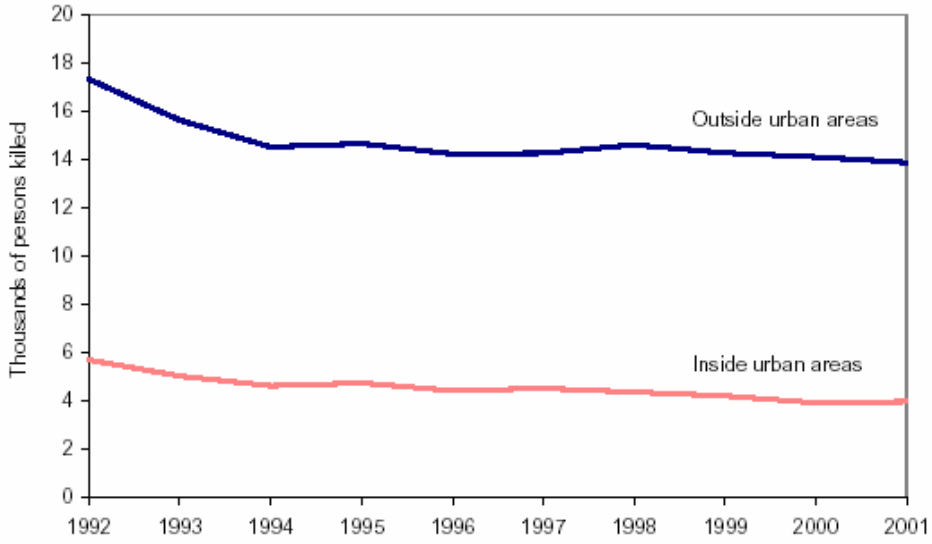


Source: EU Energy & Transport in Figures, 2003

The collection and analysis of data on accidents and physical injuries is essential to be able to make an objective evaluation of road safety problems, to identify the priority fields of action and to monitor the effects of the measures. The EU has played an active part in the definition of accident investigations methods (STAIRS project) and the creation of the CARE accident statistics database (available at http://europa.eu.int/comm/transport/home/care/index_en.htm).

As noted above, the number of fatilities decreased in relation to transport volumes, which means that safety per se is not closely linked or correlated to traffic volumes or density. In fact over a time span of 30 years in Europe total passenger.kms grew 2.4 times as fatalities were almost halved. This is due (among other things) to the fact that higher density entails lower speeds. Indeed, most people are killed outside urban areas: about 78% of all accident fatalities. The urban mileage share range from 25% up to 45% over the EU area, which is higher than the 22% urban share in fatal accidents. Therefore, less fatal accidents happen in urban areas than could be expected based on the share of urban transport in total transport. This is an hint that lower speeds in urban areas play an important role in reducing fatalities.

Road fatalities inside and outside urban areas in EU-8, 1992-2001



NB: EU-8 refers to Austria, Finland, France, Ireland, Portugal, Spain, Sweden and the United Kingdom.

Source: CARE, 2003.

Outcome indicators: intermediate impacts on transport markets

The adoption of common road safety requirements may have several impacts on the car industry, including:

- Changes in company investments and innovation (they should increase, because of new requirements)
- Changes in levels of social benefits and working conditions (they should increase)
- Changes in number of personnel or business related to legal requirements for transport business (they should increase)
- Changes in size and composition of the road vehicle fleet related to safety requirements (they should increase)

As it concern more directly transport activities, improvements in road safety may be expected to influence end users and public satisfaction as well as modal split, with a "rebound effect" of more people returning to drive cars on safer roads. However, in this context multiple feedbacks loops are active, so that it may not be possible to establish causal relationships, because statistical evidence may be very hard to collect. Recourse may be attempted to surveying reactions and opinions of the public - and the limitations and

pitfalls of this choice will have to be considered.

Outcome indicators: final impacts on transport users and non users

The final outcome indicators concern the damages to property and human beings, including injured people and their relatives, as well as the production losses due to road accidents.
A detailed analysis of the costs of accidents for the EU-15 Member States has been provided by the EU research project UNITE. The costs of traffic accidents are specified in the UNITE accounts for five cost categories. The categories are:

- material damages,
- administrative costs,
- medical costs,
- production losses, and
- the risk value (the costs of suffer and grief).

The valuation of material damages is based on actual expenses for reported accidents. The identification of administrative costs on a disaggregated level is difficult: the estimation of the costs of the police, the legal system and the insurance system could be based on average cost values per accident or per victim by degree of severity. The medical costs including rehabilitation and reintegration are actual expenses of the health sector. The valuation of the replacement costs (production losses) is rather straightforward, as it is the real expense of the victims' employer is less unequivocal. As it concerns the accident risk value, there is today a reasonably widespread agreement that monetary values of risk reductions in the transport sector should be defined so they reflect individual preferences of the affected population. The value should be expressed as the affected individuals collective willingness to pay (WTP) for safety improvements or willingness to accept compensation (WTA) for increased risk.
It also emerging an agreement that monetary values of risk reduction are context specific: the WTP for a given reduction in number of deaths can vary by a factor of more than three for different contexts. The UNITE approach concerning the accident risk value was to take national values when these are computed with a well-designed methodology, based on the WTP/WTA principle, or otherwise to adopt an European Standard Risk Value, adjusted in each country in accordance with real per capita income at purchasing power parity exchange rates. The European Standard Risk Value adopted was 1,5 millions € per fatality. To have the full value of a fatality the cost of net lost production, medical and ambulance costs must be added, which is approximately 10% of the risk value. A sensitivity range around this average risk value of 0,75 – 2,5 millions € has been used in practice in the accidents accounts.