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The 6th European Transport Safety Lecture

Road Safety in an enlarged Europe: challenges and opportunities for the 25 EU member states

By

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With comments by

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Content

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Road Safety in an enlarged Europe: challenges and opportunities for the 25 EU member states	5
1. Introduction	5
2. European Union road safety policy and European expansion	5
2.1 The accession process in terms of road traffic safety	5
2.2 The implementation of the EU's road safety policy in the Accession Countries	6
2.3 Can European Union road safety targets be achieved by the Accession Countries?	7
3. Road safety in the Accession Countries	8
3.1 Recent developments	8
3.2 What are the greatest road safety problems facing the Accession Countries?	11
3.3 What have the Accession Countries learned from the EU and what can the EU learn from them?	11
4. Road safety in the Czech Republic – a case study	12
4.1 Road accident trends in the Czech Republic in the last twenty years	12
4.2 Organisational, institutional and planning developments	13
4.3 Strengths and weaknesses of the Czech road safety system	15
5. Conclusions	15
6. References	16
Response to the 6th European Transport Safety Lecture By Ilona Buttler, Motor Transport Institute (ITS), Poland	17
Response to the 6th European Transport Safety Lecture By David Sutton, Malta Transport Authority	20
Response to the 6th European Transport Safety Lecture By Péter Holló, Institute for Transport Sciences (KTI), Hungary	22
Response to the 6th European Transport Safety Lecture By Tomaž Pačič, Directorate of the Republic of Slovenia for Roads	25

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Executive Summary

The enlargement of the European Union (EU) to include the so-called Eastern Block countries (referred to in this paper as the Central and East European countries – CEE countries, or more commonly the Accession countries – ACs) raises questions as to the impact of the expansion on road traffic safety after 1 May 2004, the date when enlargement is completed. In the recent past the EU made a decision to aim to cut the road deaths in Europe in half by 2010. However, at the time this decision was in the process of being approved it was not clear if and when the enlargement of the EU would be completed. Two questions therefore pose themselves: are the candidate countries able to meet the same targets or will they struggle to do so due to their own high accident rates, and to what extent have the ACs managed to implement EU road safety so far?

The lecture will present some basic data and information on three points: first, on current EU road safety policy and its impact on the expansion process; second, on the past and current road safety policies of the ACs; third, a case study of the Czech Republic will illustrate the strengths and weaknesses of road safety policy and its development in a single AC.

The lecture is intended to open a discussion on the lessons to be learnt, in terms of road safety, for the future second round of EU expansion with the candidate countries Bulgaria, Romania and Turkey.

Road Safety in an enlarged Europe: challenges and opportunities for the 25 EU member states

By Josef Mikulík, Transport Research Centre (CDV), Czech Republic

1. Introduction

In May 2004 the EU welcomed ten new members into its midst. After over a decade of negotiations, the common European territory was significantly expanded. Although transport issues constituted only approximately ten percent of the whole negotiation process, they are issues that should be given more consideration in the future. Chapter nine, "Transport Policy", was based on Articles 70 to 80 of the EC Treaty. The transport *acquis* consists mainly of secondary legislation – i.e. regulations, directives and decisions.

According to the Maastricht Treaty, transport and transport safety represent major and important parts of the common EU issues, as is clearly shown in the official EU documents on transport policy and road safety.

The process of expansion is a welcome impulse to the road safety policies of the ACs. The necessity to implement the EU's road safety directives into their national legislations should be viewed as a step forward.

2. European Union road safety policy and European expansion

2.1 The accession process in terms of road traffic safety

In terms of transport, the accession process for the ACs themselves opened in 1999 and 2000 and can be divided into two basic problems:

- A. The application of the *acquis* by the ACs and their adoption of secondary legislation
- B. Some reflections on the EU strategic documents

A. Application of the *acquis* by the ACs and adoption of secondary legislation

This process can be considered crucial in terms of road safety. However, the *acquis* covered only a relatively small part of the possible measures to be taken by the ACs – i.e. the technical aspects of vehicles, seat belts and child-restraint devices, the testing of driving licence applicants and tasks related to the ADR and AETP agreements. To be more precise, the

Transport Chapter included the following in terms of road safety:

- Road transport of dangerous goods
- Checks on the road transport of dangerous goods
- Safety advisers for the transport of dangerous goods
- Seat belts and child-restraint devices
- Technical aspects of motor vehicles

It should be mentioned that most of the candidate countries implemented the road safety *acquis* in a very short period of time and, save for a few exemptions regarding technical issues, without requesting a transitional period.

B. Some reflections of the European Union's strategic documents

In the meantime, in addition to the *acquis*, the EU has published a number of documents that are central to transport policy as a whole and road safety policy in particular. In terms of road safety policy the most important of these are "European Transport Policy for 2010: Time to Decide" (henceforth referred to as the White Paper) and the 3rd European Road Safety Action Programme (henceforth the Safety Action Programme). These documents were not part of the negotiation process, and the Commission did not monitor the readiness of the ACs to implement them.

However, application of the *acquis* was monitored by both the Commission and the European Parliament and, in addition, monitoring reports were regularly published. This screening process provided a background for the implementation of other important road safety measures, but on the whole the EC legislation was limited (it constitutes only a part of the road safety activities).

Unfortunately the EU road safety policy as a whole did not constitute part of the accession process. None of the EC institutions officially inquired about the road safety situation in the ACs, or for that matter about their road accident trends. This would seem to constitute a weakness in the accession process and one that should perhaps be given more consideration during the next future stage of EU enlargement.

Having said this, a further distinction should be made in terms of road traffic safety, namely that during the screening and negotiation process four basic and distinct groups became apparent within the ACs:

- The most developed countries, as represented by Slovenia
- Countries with similar historical and administrative backgrounds (CZ, SK, H, PL)

- The Baltic countries (LT, EST, LV)
- The Mediterranean countries (CY, M)

Based on their varying political, sociological and historical developments, the countries in these groups exhibited differences in their road accident rates and the level to which the transport *acquis* had been implemented. For example, while in general Slovenia had few problems, the Central European countries had very specific ones and the Baltic countries worse problems. The countries varied particularly in terms of the level of their institutional and legal frameworks governing road safety, the implementation of vehicle standards and their conformity to EU standards for professional drivers.

When considering the similarities and dissimilarities between the ACs the question arises of whether or not they should have co-operated with each other by forming a "subgroup of countries with poor accident records", and what the advantages and disadvantages of such a step might have been. In my opinion, most of the best policies in road safety are not overly linked to the political and/or economic situation of a country. In other words these measures can be implemented with equal success in countries with both higher and lower GDPs. Such countries should co-operate and learn from each other, but without forming "close and separate clubs".

2.2 The implementation of the EU's road safety policy in the Accession Countries

As already mentioned, the White Paper and the Safety Action Programme were both published as basic EU documents during the accession process.

These documents mapped out a clear streamlining of sustainable transport development within the EU over the coming decade and constitute an important challenge, particularly in their implementation in the ACs. These papers will undoubtedly be a significant contribution to speeding up the rate of improvement in transport operations in the ACs.

Most of the ACs commenced the introduction of an official transport policy after the political changes of 1989 and 1990, and some of them have still to complete the process. Moreover there are some countries that, due to political circumstances, do not have an official transport policy at all – e.g. Poland, which prepared a Polish Transport Policy that was subsequently rejected due to a change of government.

In turn, road safety has been integrated into the

national transport papers to varying degrees. Only some of the ACs have tabled road safety as a policy priority. These differences become clear when one considers the elaboration and approval of national road safety plans in the individual ACs:

- *Slovenia* approved a road safety plan in 2002 with a set target of reducing road accident fatalities by 210 by 2005 (i.e. a reduction of 50% compared to 1995).
- *Poland* has adopted the road safety programme GAMBIT 2000 for the period 2001 to 2010 with the target of reducing road accident fatalities to 4,000 a year by 2010 (a reduction of 36% compared to 2000).
- *Hungary* had already approved a national road safety programme in 1993, intended to reduce the number of road accident fatalities and serious injuries by 25-30% by 2000 compared to the accident rates for 1992. Hungary surpassed its own target and achieved a reduction of 50%. No subsequent concrete targets have been set.
- *The Czech Republic* approved a safety programme for 2002 to 2005 in 2001, but without specifying a concrete target. As practically no significant improvements in accident rates were achieved the safety strategy plan has been elaborated and is in the final stage of approval. The set target is to reduce the number of road accident fatalities by 50% by the year 2010 (compared with 2002 and in accordance with the EU target).
- *Slovakia* has no specific road safety programme to date.
- *Estonia* adopted its national road safety programme in 2003, aimed at reducing the number of road accident fatalities to fewer than 100 by 2015 (a reduction of approximately 55% compared to 2003).
- *Malta* considers road safety a government policy priority and integrated the issue into the Transport White Paper, approved in 2004. One of the specific objectives set by the paper under the rubric "Safer Travel" is to reduce road injuries by 50% by 2014.

This brief breakdown illustrates the continuing efforts of the ACs to undertake serious steps towards improving their poor road safety conditions and to frame such efforts in the relevant policy documents and action plans.

Some of the ACs have had direct help from experts from the core EU countries in developing their national road safety plans. The Polish GAMBIT Programme is an excellent example, the elaboration of which involved experts from Germany, France, the Netherlands and Sweden.

As far as the core road safety problems are concerned, the CDV questionnaire has established that they are the same as in the core EU countries, namely:

- Speeding
- Safety instructions
- Safety of vulnerable road users
- Traffic awareness education for children

2.3 Can European Union road safety targets be achieved by the Accession Countries?

The White Paper set an ambitious target of halving the number of road deaths in the EU by 2010. This target was subsequently worked out in the Safety Action Programme.

Before considering the question of whether the ACs can meet this target, we should be aware of the large discrepancies in road safety between the current EU countries (EU 15). These discrepancies are also marked between the accession countries (AC 10), although it must be said that in general their safety levels are considerably worse, as is shown in Table 1.

Tab. 1: Basic comparison of the average indicators between the EU 15 and the AC 10

EU 15	fatalities/mil. inhabitants	fatalities/mil. vehicles	vehicles/1000 inhabitants
	101.8	167.7	607.1
AC 10	149.9	389.6	384.6

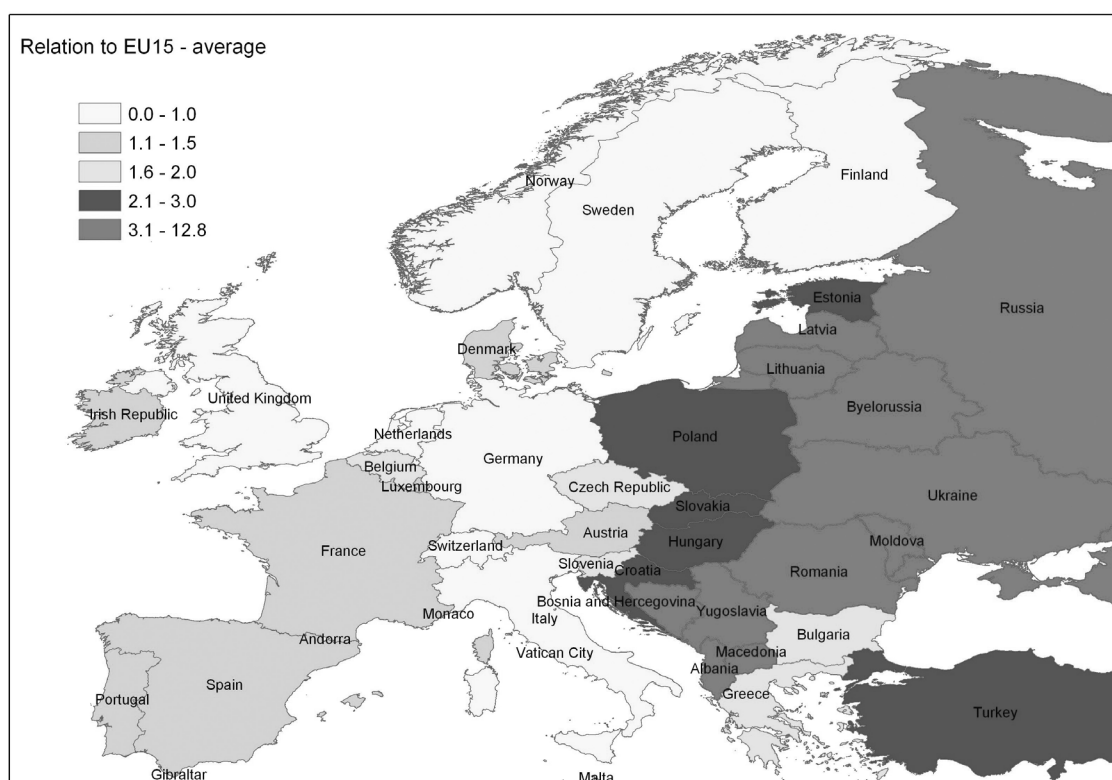
Source: IRTAD (2002)

Both accident indicators show a higher risk in the AC 10 countries than in the EU 15 – 1.5 times higher in terms of inhabitants and 2.3 times higher in terms of the number of vehicles – even though the motorisation levels are on average 1.6 times higher in the EU 15 than in the AC 10.

This contrast becomes starker when examining the individual countries as illustrated in Figure 1, which shows level of motorisation risk (number of fatalities per million vehicles) compared to the average of the EU 15 (a similar contrast is clear if one compares the number of inhabitants or driven kilometres).

Fig. 1: Motorisation risk in the European countries related to the EU 15 average

Number of killed per mil. motor vehicles (2002)



It is interesting to note how the ACs compare to the core EU member states. Thus Malta can be counted amongst the EU's safety record-holders, with safety indicator levels below the EU average. Cyprus and the Czech Republic have the same safety indicators as core members Belgium and Greece. Hungary, Poland, Slovakia and Estonia constitute the next group, exceeding the EU average by two or three times. Latvia and Lithuania enjoy the worst averages.

These variations offer ample food for thought and can be traced back to factors as diverse as the level of motorisation, the standard of living, weather and geographical conditions, transport conditions or even political and social conditions.

The "SEC-SAFETY BELT" provides an excellent opportunity by which to examine these differences in detail, to identify the potentials for improvement and to formulate tailor-made individual recommendations to achieve these improvements. This is a three-year project started in 2004, and is supported by the European Commission. The aim of this ETSC-Project is to improve road safety in the countries of Southern, Eastern and Central Europe by identifying, evaluating and promoting measures for the reduction of accident risk amongst road users. The main areas are intended to cover:

- User behaviour
- Vehicle technology
- Road infrastructure
- Road technology
- Information and databases
- Evaluation of national road safety policies

Another lesson is offered by the SUNFLOWER project (supported by the DG TREN) which compared the safety strategies in the most advanced EU countries in terms of road safety, namely Sweden, the United Kingdom and the Netherlands. The follow-up project, SUNFLOWER PLUS 6, was recently started and focuses on three Central European countries (Slovenia, Hungary and the Czech Republic) and three Southern European countries (Greece, Italy and Spain). When complete, these two major projects will offer numerous solutions to the ACs in their efforts to achieve the EU's road safety targets.

This having been said, because road safety remained "a neglected topic" in the ACs in the recent past, there are also measures available to them which could effectively improve road safety in the short term. For example:

- Improvements in infrastructure using low-cost engineering measures
- Introduction of a 50 km/h-speed limit and 30 km/h-zones in urban areas
- Increase in the usage of safety belts to European standards
- More efficient speeding enforcements

Despite the poor safety rates, the EU standards can be met provided there is a political will to assure the implementation of the appropriate measures. Following the Verona Declaration, the European Charter on Road Safety was signed in Dublin in April 2004. These documents, which contain the EU road safety target and are the remit of the highest officials concerned with road safety in the EU and ACs, are an incisive instrument for speedily improving road safety.

3. Road safety in the Accession Countries

3.1 Recent developments

Due to historical, social and transport developments over the last decades of the 20th Century, the eight accession countries from Central and Eastern Europe have what can be described as an old or starved vehicle fleet, with an average vehicle age of fifteen years. Over 90% of the cars in operational use were manufactured in the CEE countries with their corresponding historically low safety standards. The volume of traffic in these countries exhibits not only a low level of motorisation (100 to 250 vehicles per 1,000 inhabitants), but also a lower transport performance, particularly in passenger transport (with an average mileage of approx. 6,000 km per year).

These countries were internationally isolated for a considerable period and as a result their drivers can be considered internationally inexperienced. Driving behaviour was conditioned by traffic regimes that paid little attention to the demands of road safety. Despite this, police enforcement did also significantly influence road behaviour in a "positive way" because it did not merely supervise traffic rules, but simultaneously dealt directly or indirectly with civil prosecution traffic infraction.

The fall of the so-called Iron Curtain in 1989 brought with it a new situation on European roads. The free movement of citizens formerly behind this division has meant that they have broadened their activities within the framework of the European market. Motorisation has increased significantly (250 to 450 vehicles per 1,000 inhabitants) and the composition of the vehicle fleet now approaches that of Europe.

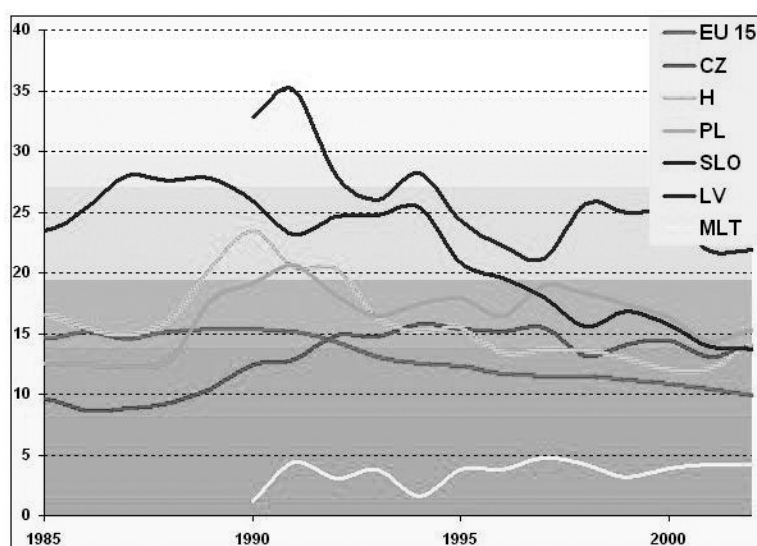
As described above, the ACs exhibit considerable divergences in both their levels of economic development and road safety. The significant differences in these countries when compared to the average of the EU 15 are demonstrated in the fatality rates laid out in Table 2 and Figure 2.

Tab. 2: Number of fatalities in the accession countries

	1985	1990	1990/1985	1995	1995/1990	2002	2002/1995
CZ	987	1 291	1,31	1 588	1,23	1 431	0,9
H	1 756	2 432	1,38	1 589	0,65	1 429	0,9
PL	4 688	7 333	1,56	6 900	0,94	5 827	0,84
SK	527	692	1,31	698	1,01	626	0,9
SLO	464	517	1,11	415	0,8	269	0,65
LT	649	933	1,44	671	0,72	697	1,04
LV	539	877	1,63	611	0,7	518	0,85
EST	191	436	2,28	332	0,76	224	0,67
MLT	13	4	0,31	14	3,5	16	1,14
CY	116	101	0,87	118	1,17	113	0,96
EU 15	52 395	56 055	1,07	45 777	0,82	38 441	0,84
AC 10	9 930	14 616	1,47	12 936	0,89	11 150	0,86

Source: ECMT

Fig. 2: Typical development of the number of road accident fatalities per 100,000 inhabitants in selected ACs



With the exceptions of Malta and Cyprus with relatively stable figures, the developments in the other countries can in general be divided into three periods since 1985.

In the first period from 1985 to 1990, the number of fatalities rose in all the countries – by almost 50% in the ACs (with the smallest increase in Slovenia and the greatest in Estonia). Even amongst the then EU member states, the number of fatalities rose in the same period by 7%. The second period shows a clear decrease of 12% in the AC 10 and of 18% in the EU 15. The only exceptions to the rule are the Czech Republic and Slovakia. Hungary and the Baltic States enjoyed the greatest decreases. The third period is likewise marked by a general decrease (with the exception of Latvia) – a 14% decline in the AC 10 and

a 16% decline in the EU. Thus the AC 10 and the EU 15 exhibit similar trends.

However, when considering the entire period from 1985 to 2002 it becomes clear that while the total number of fatalities in the EU 15 declined by 36%, those in the AC 10 rose by 11%. In 2002 some ACs experienced figures worse than those of 1985. With 45%, Poland, Slovakia, Latvia, Estonia and the Czech Republic exhibited the most alarming increases. At the same time Slovenia achieved the greatest success by reducing road fatalities by 45%.

Both experts and politicians link the poor development of accident rates in the ACs to the rapid growth of motorisation. Table 3 compares the development of motorisation over selected time periods.

Tab. 3: Motorisation in the ACs

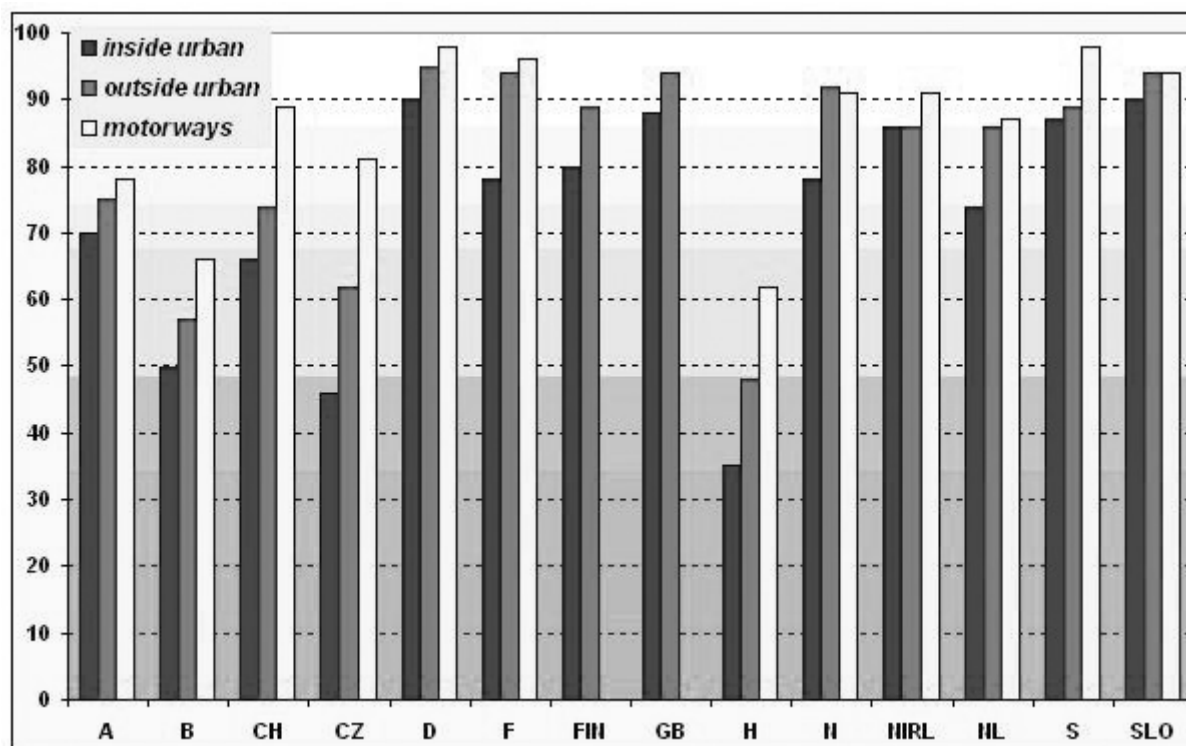
	1985	1990	1990/ 1985	1995	1995/ 1990	2002	2002/ 1995	2002/ 1985
CZ	278	311	1,12	369	1,19	431	1,17	1,55
H	183	208	1,14	259	1,24	279	1,08	1,52
PL	190	237	1,25	290	1,22	406	1,4	2,14
SK	229	251	1,09	274	1,09	341	1,24	1,49
SLO	306	375	1,22	415	1,11	533	1,28	1,74
LT	189	212	1,12	231	1,09	327	1,41	1,73
LV	180	204	1,13	182	0,89	281	1,54	1,56
EST	113	189	1,68	309	1,63	358	1,16	3,18
MLT	289	393	1,36	645	1,64	626	0,97	2,17
CY	317	439	1,39	521	1,19	574	1,1	1,81
EU 15	398	470	1,18	519	1,1	607	1,17	1,52
AC 10	207	247	1,19	296	1,2	385	1,3	1,86

[in 1990 for AC 10 without SK, SLO, LT: 1990 – 15491, 1990/1985 – 1,20]; Source: ECMT

One of most frequently discussed negative safety aspects concerns accidents caused by drinking and driving. In general, both the percentage of the road accidents that are alcohol related and their severity are very high in the core EU member countries. Finland is the least satisfactory example, where 24% of accidents are caused by drunken drivers. The Central European countries have a far better record with around 10%. Nevertheless, when considering alcohol-related accidents it should be borne in mind that most ACs still have a zero-alcohol limit for drivers, compared to the core EU countries where BAC levels range from 0.2 to 0.8 mg. per ml.

The use of safety belts highlights a further weakness in road safety in the ACs. Figure 4 shows the results of the IRTAD survey in selected European countries.

Fig. 4: Percentage of safety belt use



The figures show that usage is significantly lower in Hungary and the Czech Republic than in other European countries, particularly on urban roads.

Historically, in most of the ACs the road safety system was a centralised affair, the backbone of which was formed by the police forces and their constituent structures. Road safety remained very much part of security policy, and until the political changes of 1989 to 1990 was not integrated into the transport policies of the above-mentioned countries. In general, one can say that the police force had wide-ranging competences – from the drafting of laws and regulations to the testing of driving licence applicants and from the issuing of driving licences to local enforcement.

The process of democratisation in the ACs increasingly brought these responsibilities into the orbit of the “civilian sectors”, as is common in most core EU countries – i.e. the Ministry of Transport and the local and regional authorities. This process most commonly commenced at the outset of the negotiation process for accession, and was completed before its end. One of the demands the European Commission placed without exception on the candidate countries was that these administrative structures be reinforced and strengthened so as to ensure an adequate administrative capacity.

3.2 What are the greatest road safety problems facing the Accession Countries?

The answer to this question is by no means simple, but put briefly the problems can be listed as follows:

- Social and economic changes subsequent to the collapse of centralist regimes
- Institutional changes in the road safety systems of the ACs
- Very low respect for the Highway Code and the low level of enforcement, as for example can be seen in the results of the SARTRE project
- Lack of political will in most countries to accord road safety a high priority
- Lack of available financial resources for road safety measures at all levels

3.3 What have the Accession Countries learned from the EU and what can the EU learn from them?

The accession process in itself injected new life into the road safety policies of most of the ACs, despite the fact that the process dealt with only a part of the

wider field of road safety. The politicians concerned were obliged to take road safety into account as part of this process, and moreover were obliged to implement various negotiated legislative measures as a stipulation before joining. For example:

- Mandatory use of child-restraint devices
- New systems for testing drivers
- Implementation of measures regarding professional drivers, e.g. a system of safety advisors

Simultaneously the accession process brought with it new opportunities for road safety experts to exchange knowledge with their counterparts in the core EU countries. Poland, the Czech Republic and Hungary became members of the OECD, and their representatives joined international non-governmental organisations (NGOs) such as the PRI and CIECA and research associations such as FERSI, FEHRL and ECTRI. Bilateral contacts between the core EU members and the ACs have likewise been established. EU road safety experts not only visited the CEE countries in 1989, but have done so frequently since.

All of these contacts have played a valuable role in the implementation of the new road safety measures. These have included: low-cost engineering measures in urban areas, better protection of vulnerable road users (pedestrian priority on zebra crossings, compulsory use of cycle helmets, retro-reflective devices to better protect pedestrians), 50 km/h-speed limits in urban areas (Czech Republic and Hungary), and last but not least the formulation of new national road safety plans – although some countries such as Czechoslovakia had possessed such plans even prior to 1989.

In addition, the access to Europe afforded to the ACs has resulted in the slow but continuous establishment of road safety NGOs in these countries, which have brought with them new insights and complementary thinking to road safety as a system. One such example is the GAMBIT foundation in Poland and the Slovene National Safety Council, both of which are active and respected bodies – not only within their respective countries, but also at an international level. Unfortunately, still few of the ACs have such specialised NGOs. Road safety issues are very often the purview of purely governmental agencies such as the Czech Ministry of Transport's BESIP or the OBB of the Hungarian police force (National Road Safety Committee), or indeed the automobile clubs.

The second question is in how far the exchange of knowledge can be mutually beneficial, i.e. what the core EU countries have learned or can learn from the

ACs in terms of road safety? Close working relations with safety experts from several ACs have been firmly established over time, and these contacts demonstrate the benefits of sharing and reinforcing existing knowledge. The road safety missions by experts from the core EU countries to the ACs demonstrated the necessity of a detailed understanding of local conditions and circumstances, such as:

- A sensitive approach to the transfer of advanced knowledge
- Close co-operation with local experts and their involvement in projects

There are some practices in the ACs that could be more closely explored, namely:

- A particular knowledge of driver training (the system of obligatory practical and theoretical lessons under strict government supervision is being discussed, in a modified form, by some core EU countries)
- Experience with 0.00 or low BAC
- Roadside checks on alcohol impairment currently implemented in the core EU countries (these and previous measures lead to a marked improvement in road accident statistics concerning drunken drivers).

Recent practices in the ACs have also identified potential for road safety research:

- Systems of road accident statistics

- Programmes for modelling traffic accidents
- Computer programmes for child traffic education
- Obligatory systems of invitation in driving schools

It could be added that mutual co-operation has also emphasised the importance of a unified terminology.

4. Road safety in the Czech Republic – a case study

4.1 Road accident trends in the Czech Republic in the last twenty years

The road safety situation in the Czech Republic can be taken as representative of developments in road safety in most of the CEE countries. As can be seen from Figure 5, every important political change in the republic has brought with it changes in the road accident statistics. Thus the impacts of the Prague Spring of 1968 and the Velvet Revolution of 1989 are both clearly visible. This would imply that specific social climates play an important role in the general safety awareness and behaviour of the populace as a whole. The discrepancy between the fatality rates and the level of motorisation shows that the two factors are not correlated. The distribution of the increase in fatalities amongst the road user groups is shown in Figure 6.

Fig. 5: Road fatalities and motorisation development

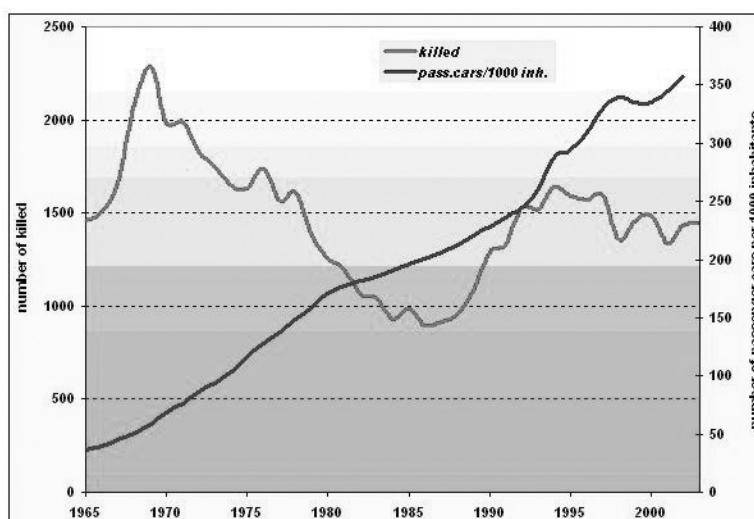
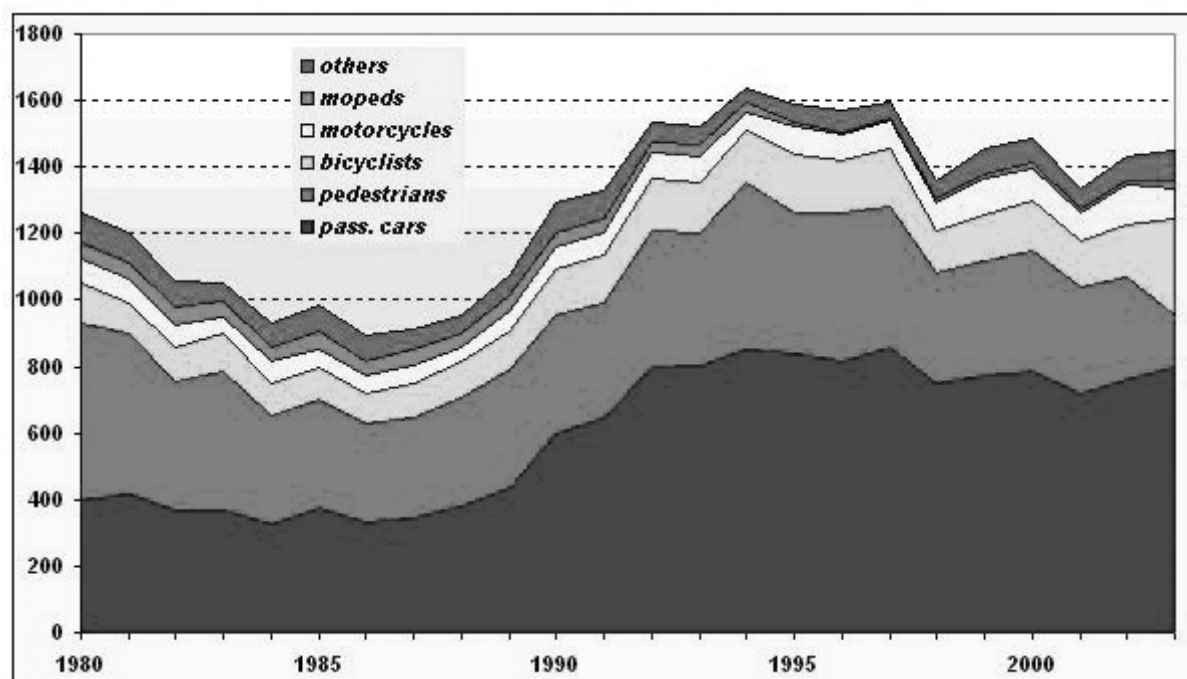


Fig. 6: Distribution of fatalities according to road user groups



The overall picture shows the enormous increase in both driver and passenger fatalities since 1990.

4.2 Organisational, institutional and planning developments

Road traffic accidents still constitute the main cause of death and injury amongst the population of working age in the Czech Republic. This is particularly true for children and young people. By comparing the data for the Czech Republic to that of both the EU and non-EU countries it becomes clear that the Czech Republic has to be included amongst those European countries with the poorest records. This holds equally true for both the overall number of accidents and for the number of those killed and injured.

The overall loss suffered by the country in road traffic accidents has been calculated as 2.2% of the GDP and the direct costs of these accidents for the same period as 4.1% of the national budget. Because these estimates do not include the costs of the damages done to such areas as the environment, smart money etc., the real costs to the nation of such accidents and the losses inflicted can in reality said to be much higher.

We are therefore obliged to ask ourselves what the reasons for these trends are, and where the structural weaknesses might lie. As with the previous cases, it is hard to draw any simple or clear conclusions. The

paper will instead start with a brief description of the previous and current road traffic-safety systems and then examine recent developments.

As can be said for most CEE countries, up until the end of 2000 the responsibilities for road traffic safety were divided between the Ministry of the Interior and the Ministry of Transport and Communications, with the Ministry of the Interior and the police force playing leading roles. This division of responsibilities often proved to be weakness, especially in terms of communications between the various bodies active in road transport safety. The situation acted as an effective brake that hindered improvements and resulted in complications.

In an effort to resolve these problems and to improve road traffic safety, the Czech government has been in the process of implementing the following measures:

- Transferral of the Governmental Co-ordinating Body for Road Traffic Safety from the Ministry of the Interior to the Ministry of Transport and Communications, effective since 1 January 1999
- System restructuring, meaning that overall responsibility for road traffic safety (with the sole exception of traffic law enforcement) was invested in the Ministry of Transport and Communications, effective since 1 January 2001
- Adoption of a raft of acts and regulations encompassing human factors, vehicles and roads, and which can be broken down in turn as follows:

- Act No. 247/2000 on Obtaining and Improving Professional Competence in Driving a Vehicle and on Changes of Some Acts (in force since 1 January 2001)
- Act No. 361/2000 on Road Traffic and on Changes of Some Acts, as amended (the so-called Highway Code, in force since 1 January 2001)
- Act No. 56/2001 on Conditions of Road Vehicles and on Change of Act No. 168/1999 on Third Party Insurance and on some Changes of Some Other Related Acts, as amended (in force since 1 July 2001).

These pieces of legislation clearly delineated the competences of the state authorities and the police. In comparison to the earlier system this has meant a reinforcement of the responsibilities of the Ministry of Transport and Communications.

Some of the key measures that have been in force as of 1 January 2001 are as follows:

- Right of way for pedestrians on zebra crossings
- Use of vehicle headlights in daytime during winter
- Rights of way for vehicles on roundabouts
- Obligatory use of child-restraint devices
- Obligatory use of cycle helmets for children aged up to 15 years

By adopting this legislation the Czech Republic's position is now far closer to that of the core EU countries; both in terms of administrative structures and in terms of the formulated measures, which in some cases (daylight use of vehicle headlights and cycle helmets) are in fact stricter.

It is undoubtedly a contributing factor that Czech Minister of Transport has shown considerable personal engagement. The minister has repeatedly and publicly stated that road safety is one of his highest priorities and has personally supported all of the effective measures that have been taken to improve national road safety. A second factor is that a shift in parliamentary thinking has taken place. For the first time in Czech history politicians voted to create a Subcommittee on Road Traffic Safety in the Upper Chamber of Parliament (Senate), consisting of nine parliamentarians.

Faced with the enormous increase in road accidents and the severity of their consequences in recent years, the Czech Ministry of Transport decided to create a brand-new Road Safety Strategy to tackle the problem. Following the lead set by the EU Road Safety Action Plan, the Czech Republic would like to half its road deaths by 50% by the year 2010 – which would mean cutting fatalities to 650 per year. In cooperation with the Transport Research Centre (CDV)

the Ministry of Transport and Communication started to draw up a draft of the strategy in 2003. The new document is based on detailed road accident analyses and the SWOT (strengths, weaknesses, opportunities, threats) analysis. The strategy is structured like a pyramid, with the main goal at its vertex built upon numerous partial goals that are in turn deduced using set measures and concrete instruments.

The partial goals, by means of which the main strategic goal is to be reached, can be listed as follows:

- Cutting the number of road accidents caused by speeding
- Cutting the number of accidents caused by impaired drivers
- Cutting the number of accidents caused by failure to give way
- Increasing the rate of seat-belt use
- Protecting more vulnerable road users
- Improving post-accident care
- Creating safe road infrastructure
- Increasing traffic law abidance

These measures can be divided between the long term (e.g. fostering a new safety culture amongst road users) and the short term. They can be expressed in two key levels:

- More efficient law enforcement, including higher penalties for infringements of the Highway Code and the introduction of a penalty point system
- Improved co-operation at all levels and between all actors, including NGOs
- Increased support for road and traffic engineering-measures
- More effective road safety campaigns and education for road users, with special emphasis on child road-safety education

The draft strategy was prepared in close co-operation with other ministries and widely discussed between all the relevant parties, including regional, municipal and public representatives. The resulting comments and recommendations have been incorporated into the strategy, and it is expected that it will come into force in 2004. The amendments to the Czech traffic acts drafted in parallel by the ministry should likewise come into force in 2004. These amendments are lesser background ones, mostly drafted in preparation to joining the EU. A "second wave" of more importance is set for later in 2004. The measures discussed are:

- Introduction of daylight use of vehicle headlights all year round
- Introduction of a compulsory road safety audit
- Stricter penalties for traffic offenders
- Increased safety regulations in areas such as road tunnels

4.3 Strengths and weaknesses of the Czech road safety system

Like many of the ACs, the Czech Republic has to deal with the financial constraints placed upon realising road safety measures. Unfortunately the state budget contains no special fund or grant system to finance road safety projects. All measures at the governmental level are financed from the respective ministerial budgets. For example national campaigns and educational activities aimed at children are funded from the Ministry of Transport's budget or traffic enforcement from the budget of the Ministry of the Interior or that of the police force. Private funding or investment is at a very low level, both at regional and local levels. For instance, only a few insurance companies have given money to a selection of road safety projects.

An overview of the strengths and weakness of the current Czech road safety system can be drawn from the following SWOT analysis. Although the analysis was formulated as an input into the preparation of the Czech Road Safety Strategy, it also gives an overall idea of the state of road safety in other ACs as well.

The strengths are:

- Declared government interest in solving the road accident problem as laid out in the Transport Policy of the Czech Republic
- Good level of co-operation with countries with good road accident records such as the UK, NL and S
- Increasing willingness of politicians to become involved in road safety issues
- Excellent road accident-data system
- Increasing activities by NGOs in the field of road safety
- Existing methodology on the road safety audit

The weaknesses are:

- Road safety awareness does not figure high in the mind of the population, meaning an underestimation of the necessity of cutting road accidents
- Lack of co-ordination of the various measures taken by both governmental and non-governmental organisations
- Non-existence of a regional road safety plan
- Non-existence of national road safety NGOs
- Recommendations by international bodies are often implemented formalistically and best practices fail to get implemented as they should or could be
- Tight state monopoly on the means of road safety information
- Lack of analytical information on the causes and consequences of road accidents

- Careless behaviour by some road users
- Low public acceptance of the Highway Code, unfortunately shared by the professional classes and the police
- Low levels of enforcement
- Lack of a database on best practices
- Poor level of road safety education

The opportunities that present themselves are:

- Decrease in the rate of road accidents and their consequences
- Decrease in the economic and human costs of road accidents
- Higher living standards
- Rise in the attractiveness of the Czech Republic in terms of investments and tourism
- Co-operation of the relevant bodies and citizens
- Increase in responsibility
- Increased enforceability of legislation

The threats that present themselves are:

- Lack of financial means to implement the necessary measures
- Short-termism of politicians
- Lack of willingness amongst the various road safety actors to co-operate
- Fact that were goals not to be met, support would inevitably decline

These opportunities and threats suggest a number of concrete measures, for example:

- Retaining the 0.00 BAC
- Involvement parliamentarians in road safety work
- A well-functioning road accident database

Improving road safety as a whole is a long-term process where we can and indeed must learn equally from the positive and negative experiences of others. For this reason, I myself consider the EU enlargement of 1 May 2004 a welcome challenge to the Czech Republic to rapidly improve its road accident record. By joining the EU the Czech Republic is ready to be an active player in the field of EU road safety issues. The country considers the EU road safety legislation to be one of the most important tools available to improve road safety throughout Europe and to help countries like the Czech Republic to implement important and necessary road safety measures with greater ease.

5. Conclusions

In taking over and implementing a substantial body of transport law, some of it related to road safety, the candidate countries undertook an enormous amount of work in the course of the association process. The candidate countries had to overhaul

their own administrative structures to ensure that they became more efficient and that they complied with those of the core EU countries. Important changes had to be made in the rewriting of transport and road safety policies – undoubtedly a boon to the candidate countries in terms of road safety.

However, this said we should not lose sight of the question of how to increase the role of road safety in the next accession negotiation process. Doing so can help the road safety experts in the future candidate countries to make road safety a higher political priority and so contribute to improved road safety records in these countries.

The enlargement of the EU brings with it higher demands on roads and road users. Undoubtedly it will also bring with it new transport policy tasks for the authorities of both the “old” and the “new” EU member states. Simultaneously, this expansion will also open up opportunities for a common transport policy, and in turn should offer better and more effective solutions to the remaining safety risk factors and obstacles in the CEE countries.

There are a number of concrete actions which could be recommended for the EU 25:

- Greater harmonisation of traffic rules and regulations
- Greater harmonisation of the traffic environment, particularly on motorways and along international corridors
- Creation of a common European system of signposting

- Common European measures to deal with traffic offences, particularly those related to speeding and drinking and driving
- Dissemination of information on the best practices from all possible fields of road safety (human factors, vehicles, road environment)
- Dissemination of road environment information and the European irregularities
- Harmonisation and intensification of European police enforcement, with particular attention to be paid to the AETR-regulation of professional drivers
- Launch of Europe-wide safety campaigns and a greater involvement in this field of safety work by the bodies and institutions of the CEE countries.

A joint effort by all the EU members and a close co-operation between them is the basis for fulfilling the ambitious EU safety target.

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Response to the 6th European Transport Safety Lecture

By Ilona Buttler, Motor Transport Institute (ITS), Poland

Thank you very much to Josef Mikulík for his extensive and exhaustive presentation of the state of road safety in the EU accession countries. In general terms the following is characteristic of these countries:

- different levels of road safety
- similar problems to be solved
- different organisation of those administrative structures responsible for prevention

This description is probably true of a number of European countries, including the existing Member States. The difference between accession and current member states is the relatively high road risk and the number of problems to be solved by regulating road safety management.

There is every indication that the accession countries will be gradually implementing the *European Road Safety Action Programme* and trying to realise the goal set by the European Commission. Various elements point towards such a course of transformation, among them the Verona Declaration and the adoption of new targets by Cyprus and the Czech Republic in their national road safety improvement programmes. The first signs that the EU Commission target could also be adopted in Poland appeared at the beginning of March. In practice this would mean that the new EU Member States would make a commitment towards reducing the number of those killed in road accidents to 5,740 in 2010. It is a very challenging task, especially as the results of the first two years of fighting traffic risks are unimpressive. The first two years brought an average annual reduction in road fatalities of merely 3.2% in the accession countries, while the concurrent drop in the 14 EU Member States (no data is available for Belgium for 2003) was 5.1%. Neither rate is particularly impressive, although the accession countries certainly have more reason to worry. Table A shows basic information concerning changes in fatality figures for different countries.

Table A: Number of road accident fatalities between 2000 and 2002 in the EU accession countries

	CY	CZ	EST	H	LV	LT	M	PL	SK	SLO
2000	111	1486	204	1200	588	641	15	6294	628	313
2001	98	1334	199	1239	517	706	16	5534	614	278
2002	94	1431	221	1429	518	697	16	5827	610	269
Change 2000/2002	-15%	-4%	+8%	+19%	-12%	+9%	+7%	-7%	-3%	-14%

The figures clearly show that Hungary faces a problem, although more recently it was very successful in eliminating road risks, as do Latvia and Estonia. Moreover, the situation in the remaining countries (perhaps with the exception of Slovenia and Cyprus) is far from stable.

Will the new accession states be able to implement the Commission target despite such a record? To be sure, all of these countries have people willing to face up to the task; however, adopting the right strategy to translate the target into practice remains a problem. It is impossible to solve all the problems in the EU accession countries over the next six years; it is necessary to select prevention tasks and choose only those that guarantee a reduction of accident fatalities in a relatively short time. The European Commission has put forward three main courses of action:

- stimulate more responsible behaviour by road users
- use the latest technology to make vehicles safer
- encourage road infrastructure improvement

The first one seems to be most promising. For the time being the results collected in the SARTRE 3 project show that compliance with traffic legislation in the accession countries is not particularly high, in particular with regulations concerning speed, seat-belt use and drink-driving. Although drivers from those countries are punished more frequently for traffic offences than EU drivers, they have a less favourable assessment of the operation of the system itself. Opinions challenging the equality of drivers in the eyes of the law were particularly disturbing. Nearly 50% of drivers surveyed believe that similar traffic offences carry different penalties. A similar number of drivers believe that many traffic offenders get away without a penalty, and that the system itself does not really help to improve road safety.

This cursory and fragmentary analysis shows that the issue of eliminating unwanted road user behaviour should be a priority in the accession countries. It would also bring the greatest benefits in terms of the number of prevented fatalities. Analyses by EU experts has confirmed as much, reinforced by the recent experiences of France. Other courses of action promoted by the European Commission (despite the widespread support on the part of drivers from accession countries) to 'encourage road infrastructure improvement' and 'use the latest technology' should also be implemented. But, because it will still take a long time before such solutions become popular and because financial resources continue to be limited no one can expect that a focus on these actions can to produce a 50% reduction in road fatalities before 2010.

The accession countries should also place a greater emphasis on the implementation of effective preventive solutions than has been the case so far. The delivery of ineffective preventive programmes consumes as much time and organizational and financial resources as that of effective programmes, although it rarely reduces road risks. The framework of this lecture does not allow for an exhaustive treatment of the problem, but I believe that the issue will soon be the subject of several research projects. Nevertheless, I would like to highlight certain elements here today. At the danger of oversimplifying, it can be said that the following are necessary to act effectively: one must know both what to implement and how to implement; one must win the support of decision-makers and road users for the proposals; and one must make the solutions work in practice. All this is easier said than done.

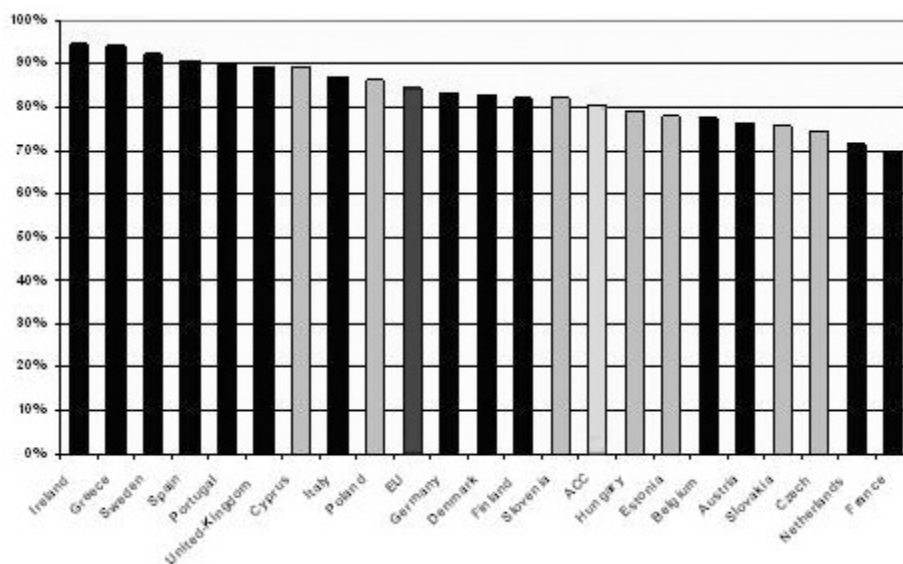
As regards the first point, the process of sorting the collected information and of developing the comparative criteria for various preventive exercises (an ongoing process in the European Union) provides enormous support to the EU accession countries. Preliminary decisions to reject solutions as insufficiently effective or too costly can already be made at this stage. Therefore it appears entirely justified to continue supporting such activities that allow the representatives of accession countries to take part in projects organised in the 6th Framework; if not as full members then at least as permanent observers. However, the dissemination of knowledge gained in various countries still remains a problem.

The other two problems appear to be more difficult. In his presentation, Josef Mikulík already mentioned the problem of winning support for road safety

activities. He rightly observed that the 'lack of political will to take road safety as a serious problem' is one of the major road safety challenges in our countries, although I would rather call it 'changeable political will'. I suspect that the last decade in the EU accession countries has seen both spells of growing interest in solving road safety problems as well as times when politicians turned a blind eye on the issue. The socio-economic situation in many accession countries has not been stabilised, many problems still await solutions and safety issues are still not treated as a priority. A situation like this undermines a consistent and multi-annual prevention policy. We hope that the continued promotion of road safety issues by the European Commission will help us to turn the situation around.

Winning over the support of road users for preventive solutions is an entirely separate issue. Results collected in the last round of SARTRE 3 show that drivers in the accession countries support the target set by the European Commission (Fig. A) and take an interest in road accidents, but that they devote an equal share of their attention to other social problems (unemployment, road congestion, health-care or environmental pollution). It is not entirely clear what the level of support for individual preventive solutions by drivers is. Views expressed by the accession-country drivers are not essentially different from the opinions of EU drivers, although certain problems with support should be anticipated when concrete preventive solutions start to be implemented. Difficulties are most likely to arise wherever the free decision-making and behaviour of road users are restricted as a result of specific solutions, primarily in the implementation of enforcement solutions. Special treatment should also be given to activities promoting the needs of

Fig. A: Opinions expressed by drivers on the quantitative action target for road safety (responses: a reduction of 50% or more) (SARTRE 3).



other road user groups. In many accession countries the traffic environment was first and foremost designed to accommodate drivers' needs (the effects of such policy are reflected in road accident statistics) and changing this situation will require substantial efforts. That handful of remarks offered so far indicate the clear need for promotion activities to be intensified and for integrating them with undertakings in other areas.

To finish my response, I would like to briefly address the implementation of preventive activities. It is by far the weakest and least appreciated link in the chain of preventive action. There is every indication that preventive action in the EU accession countries is highly dependent on the current political situation in the individual countries. The influence of politics and politicians is evident not only when strategic decisions as a whole are made (e.g. to determine action strategies or adopt programmes to improve road safety), but also when decisions are made concerning what specific activities will be implemented, at what time, in what way and for how much money. An almost complete absence of procedures to monitor the implementation of individual activities and to evaluate their effect perpetuates this status quo. It does not appear that the situation could be improved by National Road Safety Councils, which are bodies gathering high-ranking officers of leading ministries and central institutions and are promoted by the EU and World Bank experts. This solution is undoubtedly a good one when it comes to stimulat-

ing interest in road safety, but it may prove inadequate in achieving the ambitious goal of a 50% reduction in road fatalities over the next six years. It appears that the time has come to consider the option of establishing government agencies in the individual accession countries to control road safety levels. Such agencies, financed from public funds, would be in charge of:

- preparation and implementation of a national road safety improvement programme
- government social campaigns and promotion of both global and European best preventive practices
- implementation or supervision of the implementation of preventive projects financed from public funds
- cooperation with the European Road Safety Observatory in the monitoring and the evaluation of the effectiveness of projects

The accession countries have less and less time to successfully join in the European road safety improvement programme. Everything seems to indicate that economic improvement in these countries in the coming years will continue to promote car ownership, which will serve to exacerbate this already complicated situation. Very little time has been left for political decision-making on a strategic course of action in road safety. I very much hope that the governments of the accession countries are aware of this limitation.

Response to the 6th European Transport Safety Lecture

By David Sutton, Malta Transport Authority

First of all, I would like to congratulate Dr. Mikulík on both his paper and his presentation this evening. It seems to encapsulate many common sentiments and aspirations held amongst the 10 countries that have become new members of the European Union.

The on-going battle to reduce the number of casualties resulting from road traffic accidents is no easy task for either the existing or new European Union member states. As Dr. Mikulík correctly points out, the road safety *acquis* has been implemented in most candidate countries in a very short period of time, with relatively few transitional periods being requested to extend the time for implementation. I think it is fair to say that the process of realignment of our legislation, the modernisation of our practices and the upgrading of technology in the area of road safety has been a great challenge for road transport authorities, enforcement agencies and stakeholders alike, who have all been involved in the process of change. However, this transition is a clear indication that when there is strong political will to improve road safety, no stone will be left unturned. I wonder whether this high level of commitment will continue after we are all EU Members, so that we (the Accession countries) reach the goal of reducing our collective road death toll from 12,000 deaths per year to 6,000 by 2010.

I tend to disagree slightly with the views presented by the author tonight that the European Union's White Paper on transport policy and the road safety action programme should have been part of the accession negotiation process. Many of the positions and policies presented in these documents such as tunnel safety, intelligent transport systems, and electronic driving licences were in the development stage at the time and many are still undergoing the somewhat lengthy legislative process of becoming part of the transport *acquis*.

During the presentation it was mentioned that, on the whole, EC legislation is limited in the area of road safety. While this is partially true, several road safety aspects have been effectively addressed at a pan-European level - either through the *acquis* or through other related conventions; for example the harmonisation of basic road signage and road markings, setting of standards of new vehicle construction, common rules on the wearing of safety belts

and the establishment of minimum standards for the roadworthiness testing of vehicles. It is however inevitable that the principle of subsidiarity must also apply, as cultural, geographical, social and political characteristics do vary considerably between the countries in Europe, and very often accidents relate to these specific national factors.

It would not make sense, for example, to apply the same system of road speed limits on trunk roads in Malta that are currently being applied in Germany or to apply harmonised rules for driving in icy conditions in a country where temperatures never drop below zero. Moreover, discipline on the roads is highly dependant on cultural factors such as driver temperament and tolerance, the respect of enforcement agencies and fear of legal prosecution for bad driving or breaching of traffic laws. It would therefore be difficult for the European Commission to effectively monitor or benchmark each candidate country's implementation of all the provisions contained in the White Paper or Road Safety Action Programme, as is suggested in Dr. Mikulík's paper. To achieve the common goal of a reduction in road traffic fatalities by 50% between the years 2000 and 2010, countries must be allowed a degree of flexibility to try out, select and implement the measures or tools that are most appropriate for them. The role of the European Commission should therefore be to promote the exchange of best practices between different countries and set common targets for countries to aim for.

It is interesting in the presentation to hear about experiences in other countries where political intervention has either curtailed or prevented the adoption of road safety programmes. It is perhaps sad that governments and politicians often tend to look at the political mileage that can be gained from such programmes, rather than in terms of how many lives can be saved and the long-term financial impact. In Malta, bold traffic calming and speed reduction schemes were introduced in several accident black-spot localities 3 to 4 years ago. To say that motorists were infuriated by some of these schemes is an understatement. Both politicians and road transport authorities were subject to relentless criticism from road users - however, neither succumbed to the persistent public pressure to have these schemes removed. Now, some three years later, with statistics to hand that show clear reductions in road injuries along these stretches, the critics are nowhere to be seen and the schemes have been fully accepted.

Which brings me to my last comment on the presentation. As Dr. Mikulík ably illustrated, the use of comparative road accident statistics can strongly provoke dormant governments into action when unfavourable

international comparisons are being drawn and when, broken down in more detail, such statistics can clearly indicate areas of weak enforcement or ineffective transport policy within each country.

However, in saying this, statistics can also be misleading. The graph presented tonight comparing per capita road accident fatalities in different accession countries shows Malta in a very good light with an annual average of 4 deaths per 100,000 per head of population. In fact this favourable statistic made us highly

complacent for many years. However, when we looked at these statistics more closely from the perspective of number of deaths per kilometre travelled on our roads, we were shocked to find out that our accident rates in this respect are actually 2 to 3 times higher than the European averages. This goes to show that we can never afford to be complacent in our fight to reduce road traffic accidents. And, as with the Czech Republic, we must always keep objectively assessing our weaknesses and strengths in this area.

Response to the 6th European Transport Safety Lecture

By Péter Holló, Institute for Transport Sciences (KTI), Hungary

Some methodological questions of international comparison:

- "...are the candidate countries able to meet the same targets [a 50% reduction in fatalities by the year 2000] or will they struggle to do so due to their own *high* accident rates...?(executive summary)
- "...the accession countries to undertake serious steps towards improving their *poor* road safety condition...."
- "...although it must be said in general their [the AC 10's] safety levels are *considerably worse*, as shown in the Table1."
- "...even though the motorisation levels are on average 1.6 times higher in the EU 15 than in the AC 10."
- "These variations offer ample food for thought and can be traced back to factors as diverse as the level of motorisation...."

In connection with the above citations we have to emphasise the well-known relationship between the level of motorisation and the fatality rate. This sig-

nificant relationship should be the basis for all international comparisons regarding road safety. Figure A shows this relationship based on IRTAD data for 2002. This is the updated form of the famous Smeed relationship.

It can be seen from the Figure A that the higher the level of motorisation, the lower the fatality rate (in the profession the number of people killed in road traffic accidents as related to the number of motor vehicles is called fatality rate and not motorisation risk). Taking into account this relationship, it is obvious that the road safety level in the accession countries is worse than that in the present EU member states.

If we speak about a *bad* road safety situation, this evaluation must be based on the comparison between the theoretical and observed values of fatality rate, but not on the comparison between countries with entirely different levels of motorisation.

„It is interesting to note how the accession countries compare to the core EU member states. Thus Malta can be counted amongst the EU's safety record-holders, with safety indicator levels below the EU average. Cyprus and the Czech Republic and Slovenia have the same safety indicators as core members Belgium and Greece. Hungary, Poland, Slovakia and Estonia constitute the next group, exceeding the EU average by two or three times. Latvia and Lithuania enjoy the worst averages.”

Fig. A: Relationship between level of motorisation and fatality rate (IRTAD 2002)

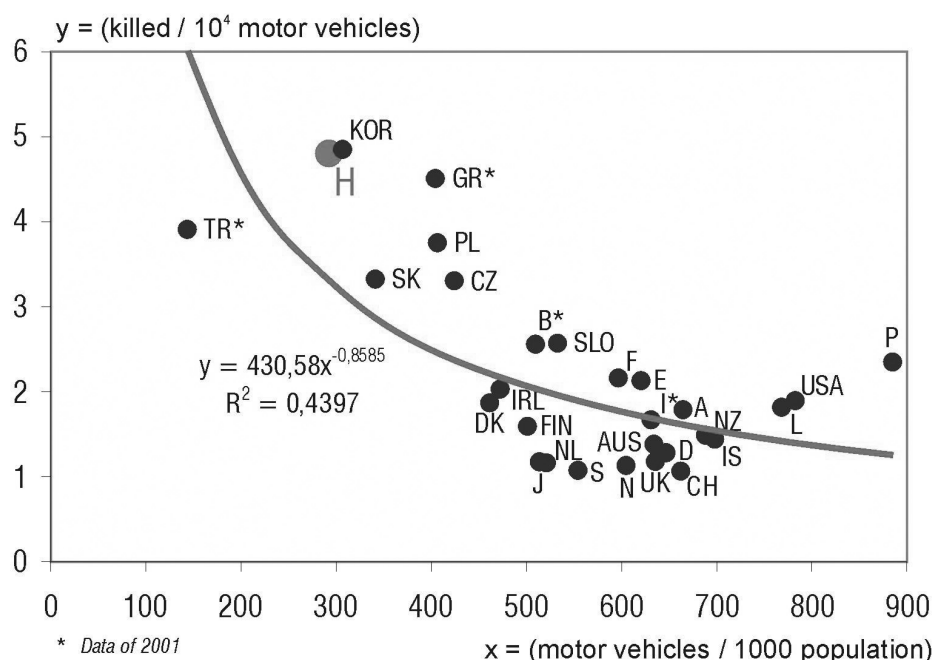


Fig. B: Fatality rates in the new member states taking into account the level of motorisation. (IRTAD, ECMT 2001)

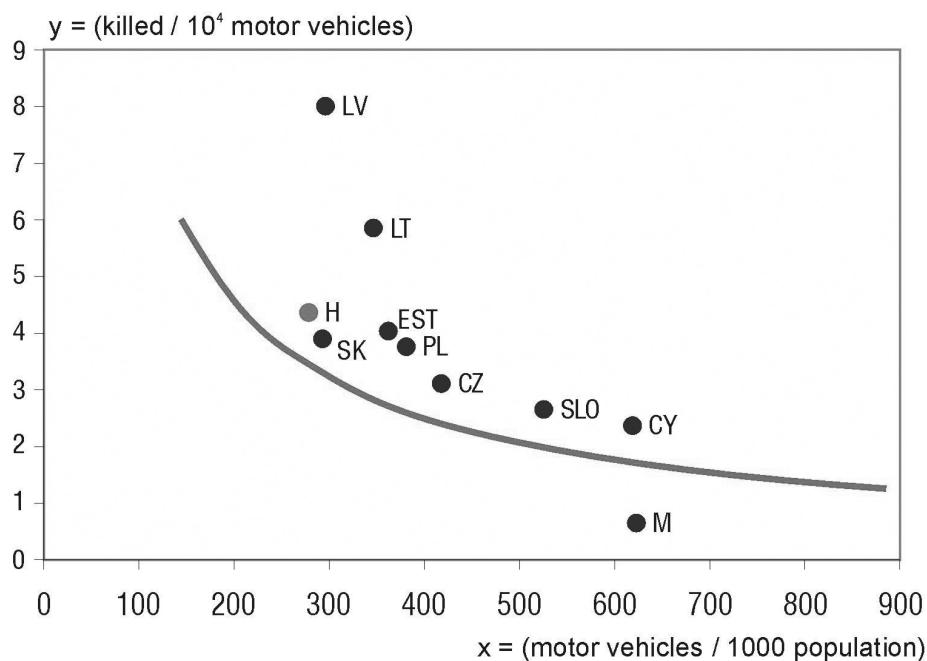
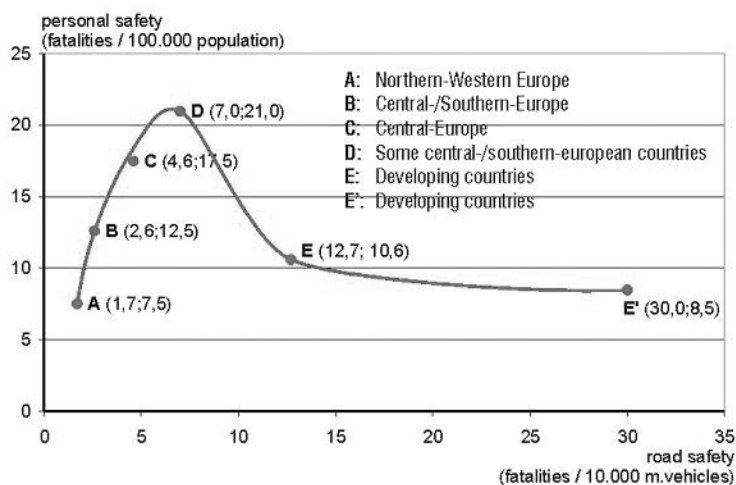


Fig. C: Relationship between road safety and personal safety



This situation is not surprising because Malta – the safety champion – has the highest level of motorisation (above 600 motor vehicles/1,000 inhabitants) among the accession countries. Latvia and Lithuania (Fig. B) – the countries with the highest fatality risks among the AC 10 – can be characterised by the lowest level of motorisation (about 300 motor vehicles/1,000 inhabitants). It is interesting to observe that Latvia and Hungary have the same level of motorisation but their fatality risks are entirely different (Hungary, about 4 killed/10⁴ motor vehicles; Latvia, about 8 killed/10⁴ motor vehicles).

If we suppose that the regression curve represents

the average fatality rates, we can say that the countries above the curve have higher fatality risks than the average, but that the countries under the curve have lower fatality risks than the average. Based on this kind of evaluation it can be said that the only country among the AC 10 which can be characterised as having a fatality rate under the average, is Malta. All other accession countries have fatality risks above the average. Outstanding high fatality rates are characteristic for Latvia and Lithuania.

Of course, there are a lot of factors which can explain the different road safety levels. As Mr. Mikulík has mentioned, these include living standard, geographi-

cal and weather conditions, drivers' behaviour, attitudes to road safety measures, political and social situation etc.. There are different indicators for international comparison of road safety. We have to be careful because the application of only some of these indicators can be misleading. For example, the mortality rate (number of people killed/100,000 inhabitants) can be low not only in the case of countries with good road safety, but equally in countries with a low level of motorisation. Therefore we can use this indicator without bias only in the case of countries with the same level of motorisation. In countries with a good road safety situation, both indicators (road safety – number of people killed related to the motor vehicle fleet, and personal safety – number of people killed related to the population) must be low, as can be seen in Figure C. This model is more appropriate for international comparisons than the application of one of the indicators alone.

In addition to stressing the link between motorisation and road safety a few other points mentioned by Josef Mikulík deserve additional comments:

1. The rapid growth of motorisation that Josef Mikulík highlights in his lecture can lead to the deterioration of the road safety situation only in the absence of consistent road safety measures and effective policies. The examples demonstrating the opposite (growing motorisation and improving road safety situation) can be seen in Figure A.
2. The low rates of safety-belt use in the Czech Republic and Hungary can be connected to the relatively low levels of police enforcement and road safety campaigns.
3. The accession countries have learned a lot in the field of road safety, not only from the EU but from the Nordic Countries as well. A successful example is the DRL (daytime running lights). This is an invention of the Nordic countries which could be implemented successfully in several accession countries. Hungary introduced obligatory DRL-use only outside built-up areas, but then all year round. Scientific investigations have proved the positive long-term road safety effects of this measure (13% decrease in the number of daytime head-on and crossing vehicle collisions). I think this could be a further positive example to the present EU member states. In connection with this measure, I would like to emphasise that DRL has positive road safety effects not only in the wintertime, but in summertime as well.
4. The introduction of a point demerit system can really be helpful in the improvement of drivers' behaviour, but I would emphasise only if the system introduced is an effective one. The Hungarian version introduced in 2001 has proved

to be very inefficient because of the very low number of points incurred for infraction. On 1 April 2004 a stricter version was introduced.

To summarise, the road accident fatality rate shows a close correlation with the level of motorisation in the country concerned – the road safety shortfall experienced in relation to the present EU member states is mainly due to the lower level of motorisation in the associated countries. This is due to the fact that this level is a good indicator of the state of the economy and infrastructure as well as the importance and the role of road accident prevention in a given country.

Consequently, the road safety situation of the accession countries corresponds more or less to their level of motorisation. Of course, all this does not mean that it is impossible to achieve a higher level of road safety than the present one, i.e. the one which is to be expected on the basis of their level of motorisation. In order to achieve this improvement we have to use the experience of the countries which are ahead of us both as regards motorisation and road safety. However, this requires wider implementation of the solutions proven there and an effort not to repeat their earlier mistakes.

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Response to the 6th European Transport Safety Lecture

By Tomaž Pačič, Directorate of the Republic of Slovenia for Roads

In trying to describe road safety conditions in the countries that will enlarge the European Union in just a few days time, one must avoid relying merely on safety figures. It is true that comparative indicators enable clear ranking or allow countries to be placed at some unpopular safety level, but explaining the story behind those figures is far more descriptive and representative.

In his lecture, Mr Mikulík mentioned Slovenia as a country that has made rather good progress in road safety in the past. Therefore allow me to highlight the historical background to road safety development in Slovenia.

Historical Background

Firstly, seen in terms of its geographical position Slovenia has always been part of the wider European entity. Historically Slovenian society has always been western-orientated and influenced by surrounding cultures. Linking as it does both north (Austria) and south (Croatia) and east (Hungary) and west (Italy), Slovenia has had inevitable transport demands placed upon it, reflected in a high degree of transit across its borders.

Secondly, a rather rapid pace of economic growth after the Second World War has made Slovenia one of the most developed republics of the former Yugoslavia. Slovenia already experienced its first motorisation boom as early as the early 1970s and motorisation increased fourfold between 1970 and 1994. The infrastructure, although modernised, was not able to adequately cope with the needs of booming motor transport. As a consequence traffic safety seriously worsened, with the number of fatalities rising steeply until the beginning of the 1980s.

Thus, the road safety-warning bell started ringing quite early. The police, road authorities and vehicle inspectorate initiated activities for safety improvement. The Slovene Road Safety Council and local road safety councils focused on child protection and school education. At the time the effort put into road safety improvement did not seem to correspond to the results. Together with the steep rise in motorisation the automotive society learnt its les-

sons the hard way and bore a rising death toll.

The turning point came at the beginning of the 1980s with a decline in the personal safety indicator. From this period onwards personal and traffic safety has steadily improved.

Roads and Traffic

It should be pointed out that the greater part of passenger transport, almost 90%, and approximately half of goods transport is carried by the road network. The dominant segment, 85%, is interior transport.

In the 1970s an ambitious programme of national motorway construction was initiated to establish a modern national and international infrastructure, something akin to a cross-connecting backbone. The project stalled in the 1980s, only to be resumed in 1991 after Slovenia gained independence. The motorways and expressways found themselves in immediate use, albeit mostly by interstate or international traffic. Nowadays about 24% of road traffic is carried on motorways and expressways, which constitute only 2% of the public road network.

Further engineering measures comprise the implementation of systematic safe design in urbanised areas, the construction of pedestrian and cycling facilities, roundabouts and traffic-calming designs and accident black-spot removal.

Consequently modern roads and safety-enhanced designs significantly contribute to the overall safety improvement in Slovenia.

Road users

1. Education and Protection

Road safety activities concerning the road user started back in the 1950s with systematic traffic safety education, enforcement and the first organised preventative campaigns. Although the priority of children's road safety through education has always prevailed, campaigns aimed at the road user have never been neglected. The long-term issues are speeding, intoxicated driving and the use of seat belts and headrests while driving. With the foundation of the Slovene Road Safety Council and, moreover, of the Local Road Safety Councils in 1972, a systematic coverage of activities was generated from 1975 onwards. These ranged from the education of professional drivers and school children to implementation of safe school walkways, traffic-calming designs and

free school transportation. Today Slovenia is one of the most successful European countries in terms of the safety of children in road traffic. It should be emphasised that the benefits of road-user activities are co-ordinated on governmental and local levels with the involvement of NGOs. Finally the car fleet is in a process of modernisation and car occupant safety is constantly improving with passive in-vehicle elements.

2. *Legislature and Enforcement*

In the past legislative acts were tailored to the current road safety situation, always strict on speeding and drink-driving offenders. The years of liberalisation and welfare in the 1990s brought with them a modernised and faster car fleet and induced the need for tougher new road laws. In 1998 a new Road Safety Act was adopted which enforced extremely tough penalties for traffic violations, introduced penalty points and, as the most severe measure, prescribed the revocation of driving licences. The act was preceded by an intense deterrence campaign in the media, accompanied by increased police surveillance. Consequently an exceptionally short-term safety effect was achieved. The Road Safety Act also introduced 50 km/h-speed limits in local areas and mandatory daylight use of headlights.

In 2002 a national road safety target was adopted by Parliament with the approval of the National Road Safety Programme of the Republic of Slovenia – a systematic document that highlighted the most important safety problems of speeding, drink driving, vulnerable road users and the safety of young drivers.

3. *Research*

Fundamental strategic road safety research based on internationally approved methodologies has been undertaken at a national and international level over the last decade. Currently the majority of road safety activities are based on such strategic research.

It should be noted that, based on the macroscopic safety prediction model elaborated by Koornstra-Oppe in 1993, the prognosis for Slovenian road traffic safety development is that it is subject to equal or similar rules as those which have been established for the developed Western European countries, especially the Alpine countries, and that the Slovenian traffic safety rate corresponds to that in these countries with an approximate 15-year time lag.

Conclusion

Seen in terms of the “SEC-SAFETY BELT” project, almost all of the listed potential road safety areas have been dealt with in Slovenia in the past. Furthermore, with the adoption of the long-term Vision Zero statement in 1991 the Slovenian government took on responsibility for the further improvement of national road safety.

However, following the common goal in an enlarged European Union, new initiatives concerning overall in-depth safety approaches will have to be given consideration.

ETSC Members

Austrian Road Safety Board (KfV)
Automobile and Travelclub Germany (ARCD)
Belgian Road Safety Institute (ISBR/BIVV)
Birmingham Accident Research Centre,
University of Birmingham
Centro Studi Città Amica (CeSCAm),
University of Brescia
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