Making our drivers and roads safer

Selected results from a European survey
The authors and "SARTRE group"

Editorial committee:
Ilona Buttler, ITS, PL; Jean-Pierre Cauzard, INRETS, FR; Claudia Evers, BASt, DE; Uwe Ewert, BFU, CH; Werner Klemenjak, KfV, AT; Juha Luoma, VTT, FI; Allan Quimby, TRL, UK.


Additional scientists that participated in the study are: Dago Antov, IB STRATUM, EE; Niko Arnerič, KC KIMDPS, SI; Christian Brandstätter, KfV, AT; Gitte Carstensen, DTF, DK; Rainer Christ, KfV, AT; Saskia de Craen, SWOV, NL; Finbarr Crowley, NRA, IE; Marilys Drevet, IBSR, BE; Nuša Ferligoj, Ljubljana Faculty of science, SI; Bernhard Fink, KfV, AT; Mikiós Gábor, KTI, HU; Charles Goldenbeld, SWOV, NL; Hardy Holte, BASt, DE; George Kanellaidis, HIT, EL; Catarina Lorga, ISCTE, PT; Georgia Louca, NTUA, EL; Mateja Markl, SPV, SI; Marko Polič, Ljubljana Faculty of arts, SI; Vlasta Rehnová, CDV, CZ; Grega Repovš, Ljubljana Faculty of arts, SI; Tiia Roiväs, IB STRATUM, EE; Fermina Sánchez Martín, DGT, ES; Pavlina Skládaná, CDV, CZ; Michael Smuc, KfV, AT; Gian Marco Sardi, SIPSiVi, IT; Fergal Trace, NRA, IE; Jan Tecl, CDV, CZ; Ward Vanlaar, BIVV, BE; George Yannis, NTUA, EL; Vlasta Zabukovec, Ljubljana Faculty of arts, SI; Neophytos Zavrides, ETEK, CY; Bojan Žlender, SPV, SI.

Others involved are: Catherine Brutsaert, IBSR, BE; Sven Dahlstedt, VTI, SE; Ian Ifver, SNRA, SE; Vladimir Labath, ARK, SK; Thomas Lekander, SNRA, SE; Lucia Lisa, SIPSiVi, IT; Kirsi Pajunen, VTT, FI; Milan Panic, HAK, HR; José Paquete de Oliveira, ISCTE, PT; Pierangelo Sardi, SIPSiVi, IT; Petr Vás, ASSp, SK; Nenad Zuber, HAK, HR.

Warning. The SARTRE 3 project received funding from both participating countries and DG TREN of the European Union Commission. This document reflects only the authors’ views. The various authors’ institutions as well as the Commission are not liable for any use that may be made of the information contained therein.

Copyright: INRETS Editor: J.-P. Cauzard November 2004

Contact in UK: Allan Quimby, TRL

ISBN: 2-85782-612-5 ISSN: 0768-9756
CONTENTS

A picture of European car drivers: the SARTRE project ........................................5
Some background information on the countries .........................................................6
Key risk factors: alcohol, speed and not wearing seat belts .................................7
Drinking and driving afterwards ..................................................................................9
Breaking speed limits .................................................................................................13
Not wearing seat belts ..............................................................................................15
Relation between drink-driving, speeding and not wearing seat belt ..................17
Improving road safety ............................................................................................17
Traffic regulations promoting safety ........................................................................18
New technologies designed for improving traffic .....................................................19
Harmonisation of European road safety policy .......................................................21
The challenge of improving drivers’ behaviour .......................................................24
What can we learn from this study? .................................................................29

ILLUSTRATIONS

European countries involved in the "SARTRE" project ...........................................4
Changes in legal limit for drinking and driving in European countries since 1990 ....8
Figure 1: Proportion of drivers in each country who had been checked for alcohol in
previous 3 years ........................................................................................................10
Main speed limits in European countries ................................................................12
Figure 2: Proportion of drivers in each country penalised for speeding in previous 3 years14
Figure 3: Proportion of drivers thinking that wearing a seat belt is not necessary if they
drive carefully ............................................................................................................16
Figure 4: Proportion of drivers supporting various accident reduction targets* ........22
Figure 5: Proportion of drivers in each country thinking their own driving is less dangerous
than other drivers ....................................................................................................25
Figure 6: Proportion of drivers enjoying driving fast .............................................26
Figure 7: Proportion of drivers making at least one telephone call each day while driving.28
Some thoughts for drivers .......................................................................................32
Institutes involved in SARTRE project .............................................................34
Legal limits for drinking and driving over Europe in 2004 (g/l) ..............................35
European countries involved in the "SARTRE" project
A picture of European car drivers: the SARTRE project

SARTRE is an acronym for ‘Social Attitudes to Road Traffic Risk in Europe’. The SARTRE group started to look at safety on European roads in 1991 by conducting the same driver surveys in each country. The first SARTRE study was conducted in 15 countries, the second, conducted five years later, was expanded to include 19 countries. The latest, called SARTRE 3, was carried out in 23 countries. Each country surveyed around 1,000 drivers so that, in total, approximately 24,000 drivers were interviewed. The surveys provide information on driver attitudes, behaviour and experiences (e.g. of enforcement activity) and therefore provide an excellent opportunity to compare drivers in different countries and identify measures that could improve behaviour and safety both in individual countries and throughout Europe.

This document is intended to report some of the main findings of the SARTRE survey to a Europe-wide audience. In particular it compares the attitudes and behaviour of drivers, examines how drivers feel about traffic regulations, considers how cultural and social factors influence safety and discusses which measures could be taken to make European drivers safer.

The SARTRE 3 surveys show that most drivers are concerned about road safety, recognise that driver behaviour is a very important factor in contributing to road safety and also report that they frequently engage in dangerous and illegal behaviours. This means that if the European Commission is to achieve its target of reducing traffic fatalities by a half by the year 2010, all drivers have an important role to play; the message is that we all need to play our part and modify our behaviour behind the wheel. This, in all probability, means each of us!

Although the findings of such surveys can sometimes be questioned, especially face-to-face ones such as used by the SARTRE group, with some people tending to give socially acceptable answers, the results reported here are sufficiently strong to allow us to paint a picture of European drivers, even if this picture is changing over time.

Some of the findings of the study that relate to self-reported risk taking, attitudes towards various countermeasures and possible ways of
improving road user safety are reported here. How do the results fit in with how you think?

**Some background information on the countries**

Over the last thirty years, there have been a number of initiatives undertaken which were designed to reduce the number of persons killed in road accidents. For example, the introduction of legislation requiring people to wear seat belts or drink less alcohol before driving, and in recent years many countries have banned the use of mobile phones while driving.

Also, over this period of time, there have been some moves to harmonise traffic law across Europe. However, there are still large differences between countries in terms of road networks, traffic density and accident rates. There are also differences in safety related legislation and, importantly, how it is enforced. For example, there are sizeable differences in the legal limit for drink-driving and whether novice or professional drivers have a different limit, and how such laws are enforced with some countries regularly using breathalysers to test drivers, whether randomly, on suspicion, or after being involved in an accident. There are also very marked differences between countries in the use of speed cameras to enforce speeding.

Such differences have resulted in countries having a variety of road safety trends over the 5 years preceding the latest survey. In this respect, among those countries who participated in the last two SARTRE surveys, it is possible to identify three types of country:

— The first type, that includes Austria, Germany, the Netherlands, Poland, Portugal, Slovenia and Switzerland, has clearly improved in terms of road safety and as a result the number of fatalities has reduced.

— The second group has remained more or less stable. This group contains Belgium, the Czech Republic, Finland, France, Greece, Hungary, Ireland, Italy, Spain, Sweden and the United Kingdom. Although there has been some improvement in the number of fatalities in these countries, it is much less obvious than in the first group. However, a number of these countries, such as Finland, Sweden and the United Kingdom, already had a very good road safety record so that it would have been more difficult for them to have shown any additional improvement; nonetheless even these ‘safe’ countries are aiming for further improvements while road safety still needs further improvement in the remaining countries in this group.
— The third group has only a single member. In Slovakia, the road safety situation has deteriorated in the last 5 years and there has been an increase in the number of fatalities.

These differences, as well as those found for attitudes and reported behaviours, appear to show that a contrast exists between drivers in Northern and Southern countries, as well as (but to a lesser extent) between Eastern and Western Europe. However, it is not only the drivers that are different; there are also marked differences in the socio-economic situation, infrastructure and culture of different countries that also play a role in shaping a country’s safety record.

In general, drivers’ opinions appear to have changed more than their behaviour since earlier surveys. In most of the countries, except Spain, these changes are positive with regard to road safety. This is especially the case with respect to seat belt use, while the results for drink-driving and speeding are much less obvious and more varied.

Key risk factors: alcohol, speed and not wearing seat belts

Driving after drinking alcohol, breaking speed limits and not wearing a seat belt are recognised by most drivers as being dangerous. However, many drivers still engage in such actions; the question to resolve is why they do it; and perhaps why we, knowing what we do, may also do such things.

It has been estimated that if these three single risk factors could be improved in a significant way on Europe roads, the number of serious injuries or fatalities could be reduced by half - the target set by the European Commission in 2001 to be achieved by 2010.
## Changes in legal limit for drinking and driving in European countries since 1990

<table>
<thead>
<tr>
<th>Year</th>
<th>Czech Rep.</th>
<th>Hungary</th>
<th>Slovakia</th>
<th>Sweden</th>
<th>Poland</th>
<th>Estonia</th>
<th>Croatia</th>
<th>Latvia</th>
<th>Lithuania</th>
<th>Finland</th>
<th>Netherlands</th>
<th>Portugal</th>
<th>Slovenia</th>
<th>Belgium</th>
<th>France</th>
<th>Austria</th>
<th>Denmark</th>
<th>Germany/W</th>
<th>Germany/E</th>
<th>Spain</th>
<th>Greece</th>
<th>Italia</th>
<th>Cyprus</th>
<th>Switzerland</th>
<th>Ireland</th>
<th>Luxembourg</th>
<th>Malta</th>
<th>U. Kingdom</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1991</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1992</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1993</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1994</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1995</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1996</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1997</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1998</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>1999</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>2000</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>2001</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>2002</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>2003</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
<tr>
<td>2004</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.5</td>
<td>0.4</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.0</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.5</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
<td>0.8</td>
</tr>
</tbody>
</table>

* 0.0 on 28/08/2004
** 0.5 in 2005
**Making Our Drivers and Roads Safer**

**Drinking and driving afterwards**

The issue of what should be the legal limit for drinking and driving is an important one; and one that perhaps could be harmonised across Europe. There are countries with an alcohol limit currently below the one most frequently adopted throughout Europe, which is 0.5 g/l. Drivers in these countries are relatively less in favour of adopting this limit as a common European standard. However, two-thirds of the drivers in countries with a limit higher than 0.5 g/l would support reducing the limit to this level; surely a finding that politicians in such countries should take account of in planning their future road safety strategy. However, all countries should be able to set, or keep, a lower limit if required. The map on page III shows what countries would be involved if a single European limit, of 0.5 g/l, were to be adopted. Four countries would need to lower their limit while seven would be under this level.

It is also worth noting that having a zero limit, so that no alcohol could be drunk before driving, for novice drivers was strongly supported by most of those interviewed. Some countries, e.g. Austria, have already implemented such a law.

It appears that drivers are well aware of the safety problem that drinking and driving presents. Fifty nine per cent of them support the idea of introducing legislation that does not allow drivers to drink any alcohol or to reduce the existing legal alcohol limit. The problem is that those drivers who currently drink and drive are not the ones who are most aware of the safety implications of drinking and driving. Drivers who support measures to reduce drinking and driving tend also to state that they drink very little or not at all.

Another interesting finding was the number of European drivers who had experienced drink-drive enforcement. **Figure 1** shows that 26% of all drivers had been tested (i.e. breathalysed) in the previous 3 years, with 15% having been tested one and 11% more than once; however the experience of drivers in Italy, where only 4% had been tested, was very different from those in Finland where sixteen times as many people had been tested.

While a majority of drivers support specific measures to deal with recidivists, or repeat offenders, perhaps surprisingly relatively few supported the use of ignition locks in cars, which would prevent the driver from starting the vehicle if they were over the limit. Interestingly, around...
three-quarters of drivers were in favour of drink-driving recidivists being ‘tested’ for being alcoholics.

**Figure 1:** Proportion of drivers in each country who had been checked for alcohol in previous 3 years

Although these findings are encouraging from the point of view of safety it should be remembered that driving after having drunk alcohol remains one of the main risk factors in European countries. The European
Commission estimates that about 10,000 people, around one-quarter of all those killed on the roads each year in Europe, died in accidents which involved at least one drunk driver.
Main speed limits in European countries

* same limit on country and main roads, ** 130 May 2004
**Breaking speed limits**

The table "Main speed limits in European countries" shows how current speed limits vary in different countries for different types of road with the limits in the UK have been converted from miles per hour. With regard to speeding behaviour, the surveys revealed that drivers in different countries held very different views, so that it was not possible to identify any simple distinction between groups of countries. In general, drivers do not link driving fast, or speeding, with driving dangerously when considering their own behaviour; although they find that other drivers’ speeding is dangerous. In fact, a majority of drivers admit to breaking speed limits while driving, especially on motorways, although many support measures to reduce speeds in built up areas. The more drivers feel they can drive quickly and safely, the more they are likely to admit to exceeding speed limits.

With respect to speed enforcement, overall about one driver in five had been penalised for speeding in the three previous years - see Figure 2. However, there was a large difference between individual countries for drivers’ expectation of being detected and punished for speeding, and their actual experience of being sanctioned for speeding.
An additional finding was that support for increased enforcement of speeding differed greatly between countries, varying from 39 to 80%; additionally, while many drivers supported the increased use of speed cameras and increased penalties for speeding, there was very little support for private companies, as opposed to the police or local authorities, becoming involved in speeding enforcement.
Making our drivers and roads safer

The surveys showed a number of marked differences between countries in terms of attitudes and behaviours relating to speeding so no clear pan-European picture emerged from the results. It is therefore necessary for each country to examine how it relates to other countries and set its strategy to reduce speeding accordingly; one issue is the need to get more drivers to acknowledge, to themselves, that their speeding is dangerous, for both themselves and other road users. However, the overall results are promising because many drivers already recognise the risks involved in driving too fast and are supportive of measures taken to reduce speeding. In a number of countries, the authorities should take advantage of such support by increasing enforcement of speeding, but such measures are likely to be more effective if accompanied by mass media information campaigns.

Not wearing seat belts

In general, the surveys found most drivers had very positive attitudes towards wearing seat belts. However, many drivers still believe that if they drive carefully they do not need to wear a seat belt and also many over-estimate the risk of being trapped by the belt in emergency situations - see Figure 3. In those countries showing a sizeable number of drivers thinking this way, it will be necessary to run campaigns to change people’s attitudes towards seat belts.
The surveys found that throughout Europe the number of cars having seat belts fitted on all seats was relatively high; with 85% of cars having belts fitted. However, the proportion was still low in some countries, notably Slovakia, Hungary, Spain and Cyprus, especially regarding the use of
 restraint systems for children, the worst cases were countries from Eastern and Southern Europe, such as Estonia and Italy.

While a number of countries have very high rates of seat belt wearing, the rate is still low in others, especially in urban areas; on average 84% of drivers, ranging from 71% to 96%, always use their seat belt on motorways, but only 66%, from 36% to 91%, always use it in built up areas. These results fall some way short of having all drivers always wearing a seat belt and although wearing rates have generally increased in recent years, there is still much room for further improvement, especially as it is one of the most effective prevention measures, especially for accidents at low speed. It is therefore important that countries with low wearing rates should initiate specific programmes to improve the situation.

**Relation between drink-driving, speeding and not wearing seat belt**

Of these three risk factors, drivers are most likely to admit to speeding, whereas rather fewer admit to drink driving.

— With regard to speeding, only 47% of drivers state that they never or rarely exceed speed limits on motorways.

— Regarding driving and drinking alcohol, 4% of the drivers admitted having driven at least on one day during the previous week while they were likely to have been over the legal limit.

— For seat-belt wearing, 13% report that they never or rarely use their seat belt in urban areas.

It is interesting that the results showed an association between the various risk factors. Those drivers exposing themselves to one risk factor are also likely to expose themselves to one or two of the others. For example, drivers who exceed speed limits have a probability that they will not wear their seat belt that is 87% higher than non-speeding drivers! The association between speeding and drinking and driving is also high. While these findings are demonstrating a strong country effect, i.e. bad countries tend to be bad for all risk factors, they also highlight the problem that some drivers simply do not recognise the risks associated with driving, and how to prevent them.

**Improving road safety**

Improving road safety throughout Europe, and in individual countries, will involve considering many, or all, of the issues discussed here. It will be
especially important to try and improve driver awareness of the various issues, so that behaviour can be improved, and the numbers of accidents reduced. Two additional measures also need to be considered. The first is the use of new technologies and the second is to harmonise traffic legislation on the European level.

**Traffic regulations promoting safety**

There are many factors that influence a driver's behaviour, both individually and within different countries. One major factor is how traffic laws are enforced. Here both the actual amount of enforcement and the drivers' perception of enforcement activity, or fear of being caught and punished, are important and both these vary considerably between countries.

The *SARTRE 3* survey makes it possible to compare how various violations are controlled by the police in different countries. The survey provides information on: speeding, seat belt use and driving under the influence of alcohol.

In all of the countries taking part, regulations related to speeding were most heavily enforced, in terms of the number of drivers being penalised. Overall, drivers reported that they were twice as likely to encounter speed enforcement than drink-drive enforcement. In general, drivers sanctioned for speeding felt that they had been unlucky, and that their behaviour had not been particularly dangerous, while driving over the legal limit was viewed as being unacceptable and those detected deserved their punishment. In fact, there was a very wide support for more enforcement of drink driving and even strengthening the regulations, with almost half of all drivers thinking that it should be illegal to consume any alcohol before driving.

It is generally recognized that the driver's perception of enforcement activity is more important than the actual amount that takes place and for this reason enforcement is most effective when highly visible and well publicized. The use of enforcement by speed cameras and unmarked police cars, will make the drivers assessments about the amount of enforcement activity taking place more difficult. Therefore, these methods must be used more widely to have the same effect. This is possible with the use of automatic speed cameras, as they require less resources than ordinary police controls. It may be that a majority of drivers are in favour of more severe sanctions for drink-driving because three-quarters of those
Interviewed had not experienced such enforcement in the previous three years.

Approximately two-thirds of drivers declared that they were satisfied with existing traffic regulations (judging that the size of the punishment fitted the seriousness of the offence, that it was quickly administered and that it focussed on promoting safety, as opposed to raising revenues). Overall, 76% of drivers were in favour of greater levels of enforcement of the traffic laws, but this varied from 50 to 90% between countries. Sixty per cent were in favour of more severe penalties for speeding offences and 90% supported more severe penalties for drink-driving offences.

**New technologies designed for improving traffic**

During recent years, the number of systems using new technologies to improve road safety has increased dramatically. These have ranged from enforcement systems, e.g. speed cameras, to those designed to help the drivers, e.g. on-board navigation systems. Some systems can be compulsory, e.g. speed limiters on lorries, or optional in that they can be switched on or off by the driver, e.g. automatic speed cruise control.

There are marked differences throughout Europe regarding such developments. In some countries speed cameras and navigation systems are common, while in other countries, they are not used to any great extent, if at all, and such differences can have a strong influence on the drivers' attitudes to such systems.

However, it is certain that such systems will become more common in European countries so the **SARTRE 3** survey, unlike **SARTRE 1** and **SARTRE 2**, included a number of questions on existing attitudes towards such new technologies.

Three different types of system were included. These were those that:
• Helped the driver (aid systems),
• Imposed certain behaviour (alert and intervention systems),
• Could be used by the police to enforce the law (regulatory systems).

Support for these various systems was very varied between countries. For example, less than half (41%) of Swiss drivers supported a system designed to prevent drivers exceeding the speed limit, while in Ireland, 81% support the introduction of such a system. However, this high level of support by the Irish drivers can be partly explained by recent publicity campaigns targeting speed behaviour. It appears that some countries do not like the idea that their behaviour is being controlled, e.g. Switzerland,
Austria, Germany, and the Netherlands, although this is less the case in other countries, e.g. Ireland, France and the United Kingdom.

In addition to automatic speed cameras, some countries already use cameras to detect drivers not stopping at red lights (‘red runners’) and some use camera technology to monitor ‘tail-gating’ - where drivers of vehicles fail to keep an adequate distance between their vehicle and the one in front of them. The rapid progress being made in new technologies means that in the future a wide variety of behaviour will be monitored, and perhaps enforced.

At present, drivers are more likely to support new technologies designed to enforce red light violations than to detect speeding. As with other new technologies, Swiss drivers are the least favourably disposed to speed radars (at 42%) while the Irish (at 87%) are among the most supportive. In many countries, drivers declare themselves as being in favour of both types of system (e.g. Belgium, Finland, Ireland, Poland and the United Kingdom) or opposed to both (e.g. Austria, the Czech Republic, Germany, Spain, Sweden and Switzerland). These results are probably influenced by the current situation in each country and the drivers’ use of and experience with such devices.

While existing vehicle identification devices make it possible to have access to some services (e.g. automatic payment of tolls) they may become increasingly useful to the police to, for example, identify those who exceed speed limits, or who infringe other laws. Overall, 61% of European drivers would be ready to install such an identification system in their cars, with the highest level of support being found in Italy and Slovenia; however, only 51% would support such systems being used by the police. There are significant differences between countries. The Irish were very supportive of such a system, while the German speaking countries, Germany, Austria and Switzerland, were typically against them.

Drivers are more in favour of the use of ‘black boxes’, which could record vehicle speeds, steering, braking behaviours, etc., which could help to explain how an accident happened, than they are towards such devices which could be used by the police to enforce traffic laws.

Three elements appeared to determine the drivers’ attitude such towards new technologies:

• What the system was to be used for,

• Their familiarity with the systems; in some countries, drivers may feel that the use of speed cameras have reached saturation levels, while
MAKING OUR DRIVERS AND ROADS SAFER

Drivers unfamiliar with a given technological device can tend to overestimate both its advantages and drawbacks;
• The drivers' attitudes towards enforcement and the importance they give to their freedom to behave as they wish.

Given the current sophistication of these devices, and the potential uses to which they could be put in the future, it seems surprising that so many drivers support their introduction. It may be that we are already resigned to their introduction, as our society is becoming increasingly advanced technologically. Perhaps it is that automation is fair in that it works the same for everyone.

Harmonisation of European road safety policy

As stated earlier, the European Commission has set a target of reducing traffic fatalities by a half, by 2010. To achieve this it will be necessary for all member States, irrespective of their current safety situation, to commit themselves to introduce and co-ordinate safety projects on the national, regional and local level, as well as introducing measures throughout the European Union at a variety of strategic levels. This will involve legislation and enforcement activities to promote better (i.e. safer) driver behaviour as well as introducing more intelligent transport systems and control mechanisms.

The European Commission proposes four main measures, which are:
• To reinforce the sanction system (i.e. enforcement),
• To implement education programs and improve road users awareness of road risk (i.e. education and publicity),
• To introduce technological innovation into the equipment of vehicles (i.e. in-vehicle support systems),
• To introduce new technical solutions for road infrastructures (i.e. traffic management).

The SARTRE 3 survey has shown that European drivers are very supportive of the Commission’s main goal, with 83% of all drivers supporting the reduction target - see Figure 4. Drivers in Ireland, Greece, Sweden, Spain, Croatia, and Portugal are most supportive of the proposal, with less support being found in France, Switzerland, or Finland.
Figure 4: Proportion of drivers supporting various accident reduction targets*

* Reduce of 50% by 2010 is actual EU target

The results show that drivers in countries with the most severe road safety situation tend to be more supportive of introducing more radical measures. However, in general, extreme measures, that could be very effective, (e.g. a zero drink-drive limit) tend to receive less support than less restricting measures. As an example, in Sweden, one of the safest countries in Europe, drivers show little support for introducing more extreme new measures to improve road safety, perhaps feeling that enough is enough. Of course, the situation in Sweden can still be improved by targeting remaining problems, while other countries can look at what is done in Sweden and try to emulate their success.

The latest surveys also found that drivers are now giving a higher priority to road improvements (i.e. engineering) compared to other types of measure than they had in earlier surveys. Other safety measures, such as improving the driving test, police enforcement, or having more publicity campaigns, would still receive less support.
While the majority of road accident victims in Europe are drivers or passengers, almost one-third are more vulnerable road users such as pedestrians, motorcyclists, or cyclists. However, European drivers do not make any clear distinction between which groups of road user should be given a higher priority by governments when deciding on road safety priorities.

To help solve the problems of the key risk factors (alcohol, speed and not wearing seat belts) the European Commission are considering harmonising rules (e.g. drink-drive limits, seat belt wearing legislation, speed limits) as well as enforcement practices, such as having random breath testing, the use of speed cameras, within all countries of the European Union. In fact, the SARTRE survey examined whether drivers would support harmonisation of the laws on drink driving and speeding.

In general, drivers favour harmonisation of speed limits across Europe, although in Cyprus, 56% of drivers would not support this. However, it is likely that the harmonisation of speed limits might not be so strongly supported if it was to be accompanied by greater levels of enforcement activity and an increase in the severity of sanctions.

However, while it might appear that harmonising a common drink-drive limit could be easy, it has to be remembered that some countries have different severities of penalty for offenders depending on how much they were over the limit. While in the UK, which has set a higher legal limit, all first-time offenders are treated in a similar, and harsh, way, which together with high levels of enforcement (but without random breath testing) has led to a very high compliance with the law.

With respect to introducing a penalty points system, this was supported by 72% of all drivers; although some countries (e.g. the United Kingdom) already have such a system in operation. Drivers in Ireland were very supportive of such a system while those in Switzerland and Austria were less in favour.

Drivers at the moment are reasonably supportive of the use of cameras to enforce speeding and red light running, however, in some countries, typically those already with large numbers of such cameras, such as the Netherlands and the United Kingdom, drivers are much less supportive of speed cameras.

An additional finding was with regard to what to do about drivers who commit an offence in another country; in general, drivers were very much in
favour of the violation being passed over to the country of the offender, so that they could be suitably punished.

Taken together, all these findings suggest that harmonising traffic rules in Europe will be a lengthy and difficult process. Achieving harmonisation will depend on improving driver’s attitudes, for example via information and sensitising campaigns. Although driver mentalities are changing over time, the process is slow and countries seem to be attached to their existing systems; even though surveys, such as this one, clearly demonstrate example of good and bad practices, some countries will find it harder than others, for a variety of reasons, to move in the direction of safer roads.

The challenge of improving drivers’ behaviour

Well over half of the drivers interviewed felt that their driving was safer than others driving - see Figure 5. This perhaps shows a misplaced confidence in their own driving skill. The results also revealed that the proportion of drivers who reported that other drivers had been aggressive towards them, was higher than the proportion that had reported having carried out an aggressive act towards other drivers.

The surveys also found that a high proportion of drivers in many countries, particularly in Cyprus, Croatia, Hungary and Estonia, signal other drivers to warn them about speed traps; reflecting a low regard for police safety related enforcement activity.
The surveys revealed very different driving habits and reported behaviours in each country, with some of these behaviours likely presenting serious problems with respect to improving safety. While many of us recognise that we sometimes drive dangerously, many do not recognise the risks we are taking. This presents serious problems regarding improving driver behaviour.
Additionally there are differences in how drivers relate to driving. Drivers in Poland, Slovakia, Sweden, and Germany reported that they enjoyed driving fast more than in other countries - see Figure 6. In contrast, fewer drivers in Belgium, the United Kingdom, Finland, Croatia, and Ireland responded that they enjoyed driving fast.

Figure 6: Proportion of drivers enjoying driving fast

![Proportion of drivers enjoying driving fast](image-url)
The use of a mobile phone while driving can also be dangerous. Although many drivers do not consider the use of hands free phones as being dangerous, their use can disturb concentration and present safety problems. The number of drivers who, on average, make at least one call a day while driving is high in Estonia, Cyprus, Italy and Croatia (all over 40%) while mobile phone use, while driving, is reported much less in Spain, Poland, Germany, the United Kingdom and France (all less than 20%) - see Figure 7.
The surveys asked drivers how often they drove too closely to the vehicle in front of them (‘tail gating’). Drivers in Greece (35%) and Cyprus (25%) were more likely to report such behaviours than drivers in other countries, while very few drivers in Austria (less than 4%) reported this type of behaviour. It is interesting that this type of behaviour has not
changed much from an earlier SARTRE survey; except in Greece where it has become more common.

It is important to recognise that traffic rules and enforcement levels are not the same in all countries, and this may account for some of the differences in behaviour found in different countries. For example, drivers in the United Kingdom, Estonia and Ireland (97, 96 and 95% respectively) were much more likely to report that they gave way to pedestrians at crossings than in other countries. Very few drivers in Cyprus and Spain reported stopping for pedestrians, perhaps reflecting a lack of enforcement in such countries. In general, such give way behaviour seems to have improved since the earlier survey, especially in Sweden, Switzerland, and the Czech Republic.

Differences in legislation and enforcement may also influence the frequency of drivers who report driving through an amber (or orange) traffic light. Here, there are substantial differences between countries, with 36% of drivers in Cyprus reporting that they do it often or always while only 8% of drivers in Poland and Finland report doing so.

Drivers in Slovakia, the Czech Republic, Greece, and Cyprus reported overtaking dangerously (when they could ‘just make it’) more frequently compared to drivers in other countries.

**What can we learn from this study?**

The *SARTRE 3* survey has clearly identified examples of good and bad practice. It is necessary for safety practitioners, and perhaps individual drivers, in each country to look at the results of the surveys and review how their country is performing compared to the benchmark provided by other countries taking part in the study.

- The *SARTRE 3* survey revealed that a large proportion of European drivers were concerned about road safety. In addition, they recognise that driver behaviour is a significant risk factor in accidents. In general, they are in favour of enforcement and even of more severe penalties, especially for drinking and driving.
- It seems that an overall strengthening of traffic regulations will be necessary to improve safety, especially if the EU fatality reduction target is to be achieved. However, this will need to be accompanied by mass media education and publicity campaigns to improve public awareness and support for measures that may place restrictions on their behaviour.
In particular, it will be necessary to address the issues of speeding, drink-driving and the wearing of seat belts.

- More enforcement will be required, although this will be more effective if it is visible rather hidden. Attention needs to be given to what the public sees as being fair, since without public support interventions will fail. While drivers are prepared to accept restrictions to promote road safety, this support will disappear if the measures are seen as being ways of raising revenue rather than preventing accidents. It will be important, therefore, that extensive information is given to public as to the benefits of the measures.

- It seems remarkable that many countries still have such low seat belt wearing rates, given the time that they have been around, how effective they have been shown to be in reducing the severity of accidents, and people's willingness to wear them while flying. New ways should be found to convince users to increase their seat belt use with campaigns focusing on the countries where drivers exhibit more risky behaviours, such as Italy, Slovakia, and Cyprus.

- In all countries, drivers, and other road users, most at risk should be targeted to reduce the types of behaviour presenting the most problems. In many cases, this will mean targeting young men, those with a high income and those driving long distances each year.

- The use of new technologies to assist the driver, as well as enforcing a more appropriated behaviour, is likely to play an increasing role in road safety in the future. It will be important to use such technologies efficiently; as well as monitoring how they are being used at present, and how their use is viewed by the public.

- While the surveys showed that there are very marked differences between the drivers in European countries, it should be remembered that there are also sizeable differences between individual drivers in each country.

- Marked differences were found for attitudes, behaviour, perceptions, and experience of enforcement as well as accident involvement. When planning safety measures on an European level, it is important to consider these differences. In addition to these differences, it is necessary to consider the different traffic law legislation in each country, as well as the social, economic, and cultural context in which the drivers exist.

- National features, and experiences, need to be taken into consideration.
• Harmonisation of traffic laws is viewed very positively; drivers may see this as being fair with everyone being treated equally over Europe.

Some national features, and obstacles, are discussed in other SARTRE 3 reports downloadable at http://sartre.inrets.fr/. This information can be used to inform and support the preparation, planning and launching of European or national road safety programmes, especially with regard to positive or negative aspects of driver opinions and needs.
Some thoughts for drivers

It is likely that you are a driver, and live in one of countries taking part in the surveys described above.

You should now ask how you view yourself, as a driver, compared to other European drivers and other drivers in your country.

Do you think you are safer, more skilled, and faster? What would you want to be?

Do you ever:
♦ Drive too fast for the conditions?
♦ Not wear your seat belt or insist on others in the car wearing theirs?
♦ Drive after drinking a little too much?

If you can answer NO to all three questions, you are a very unusual type of driver.

We all expect other drivers to be safe and courteous towards us; they should receive the same treatment from us. If you behave dangerously, it encourages other to do the same. Road safety is everyone's wish and responsibility. This includes you, your family, and friends.

Having read through this document shows you have an interest in safety and driving. Hopefully, what you have read will encourage you to play your part in making our roads safer for everyone:
### The SARTRE surveys

<table>
<thead>
<tr>
<th>Country</th>
<th>National sponsor</th>
<th>Sample size</th>
<th>Field dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>AT AUSTRIA</td>
<td>Kuratorium für Verkehrs Sicherheit &amp; Österreichischer Verkehrssicherheits fonds</td>
<td>1002</td>
<td>01/11-08/12/02</td>
</tr>
<tr>
<td>BE BELGIUM</td>
<td>Institut Belge pour la Sécurité Routière, Belgisch Instituut voor de Verkeerveiligheid</td>
<td>1006</td>
<td>28/11-20/12/02</td>
</tr>
<tr>
<td>CH SWITZERLAND</td>
<td>Bureau de Prévention des Accidents, Beratungsstelle für Unfallverhütung, Ufficio per la Prevenzione degli Infortuni</td>
<td>888</td>
<td>15/01-08/02/03</td>
</tr>
<tr>
<td>CY CYPRUS</td>
<td>Cyprus Science and Technical Chamber</td>
<td>754</td>
<td>02/11-23/12/02</td>
</tr>
<tr>
<td>CZ CZECH REP</td>
<td>Ministerstvo Dopravy</td>
<td>1026</td>
<td>22/11-12/12/02</td>
</tr>
<tr>
<td>DE GERMANY</td>
<td>Bundesanstalt für Strassenwesen</td>
<td>1005</td>
<td>07/01-29/01/03</td>
</tr>
<tr>
<td>DK DENMARK</td>
<td>Danmarks TransportForskning</td>
<td>1076</td>
<td>06/11-16/01/02</td>
</tr>
<tr>
<td>EE ESTONIA</td>
<td>IB STRATUM</td>
<td>1001</td>
<td>01/11-15/12/02</td>
</tr>
<tr>
<td>EL GREECE</td>
<td>Hellenic Institute of Transport</td>
<td>1000</td>
<td>14/11-17/12/03</td>
</tr>
<tr>
<td>ES SPAIN</td>
<td>Dirección General de Tráfico</td>
<td>1694</td>
<td>16/09-27/10/02</td>
</tr>
<tr>
<td>FI FINLAND</td>
<td>Liikenne- Ja Viestintäministeriö</td>
<td>1000</td>
<td>20/10-15/12/02</td>
</tr>
<tr>
<td>FR FRANCE</td>
<td>Direction de la Sécurité et de la Circulation Routière</td>
<td>1000</td>
<td>26/11-16/12/02</td>
</tr>
<tr>
<td>HR CROATIA</td>
<td>Hrvatski AutoKlub</td>
<td>1035</td>
<td>02/11-28/12/02</td>
</tr>
<tr>
<td>HU HUNGARY</td>
<td>Állami Közúti Műszaki Információs</td>
<td>1020</td>
<td>21/11-04/12/02</td>
</tr>
<tr>
<td>IE IRELAND</td>
<td>NRA, National Road Authority</td>
<td>1014</td>
<td>02/11-04/02/03</td>
</tr>
<tr>
<td>IT ITALY</td>
<td>Ministero Lavori Pubblici</td>
<td>1002</td>
<td>02/01-27/02/03</td>
</tr>
<tr>
<td>NL NETHERLANDS</td>
<td>Stichting Wetenschappelijk Onderzoek Verkeersveiligheid, Directoraat-Generaal Personenvervoer van het Ministerie van Verkeer en Waterstaat</td>
<td>1009</td>
<td>14/11-23/12/02</td>
</tr>
<tr>
<td>PL POLAND</td>
<td>Instytut Transportu Samochodowego</td>
<td>1015</td>
<td>15/11-25/11/02</td>
</tr>
<tr>
<td>PT PORTUGAL</td>
<td>Prevenção Rodoviária Portuguesa</td>
<td>1025</td>
<td>20/01-08/04/03</td>
</tr>
<tr>
<td>SE SWEDEN</td>
<td>Vägverket</td>
<td>1027</td>
<td>02/11-12/12/02</td>
</tr>
<tr>
<td>SI SLOVENIA</td>
<td>Svet za Preventivo in Vzgojo v cestnem prometu</td>
<td>1056</td>
<td>04/11-23/12/02</td>
</tr>
<tr>
<td>SK SLOVAKIA</td>
<td>Asociácia Supervízorov a Sociálnych poradcov</td>
<td>1115</td>
<td>01/11-30/11/02</td>
</tr>
<tr>
<td>UK UNITED KINGDOM</td>
<td>Road Safety Division, Department for Transport</td>
<td>1237</td>
<td>15/02-28/03/03</td>
</tr>
</tbody>
</table>
Institutes involved in SARTRE project
Legal limits for drinking and driving over Europe in 2004 (g/l)